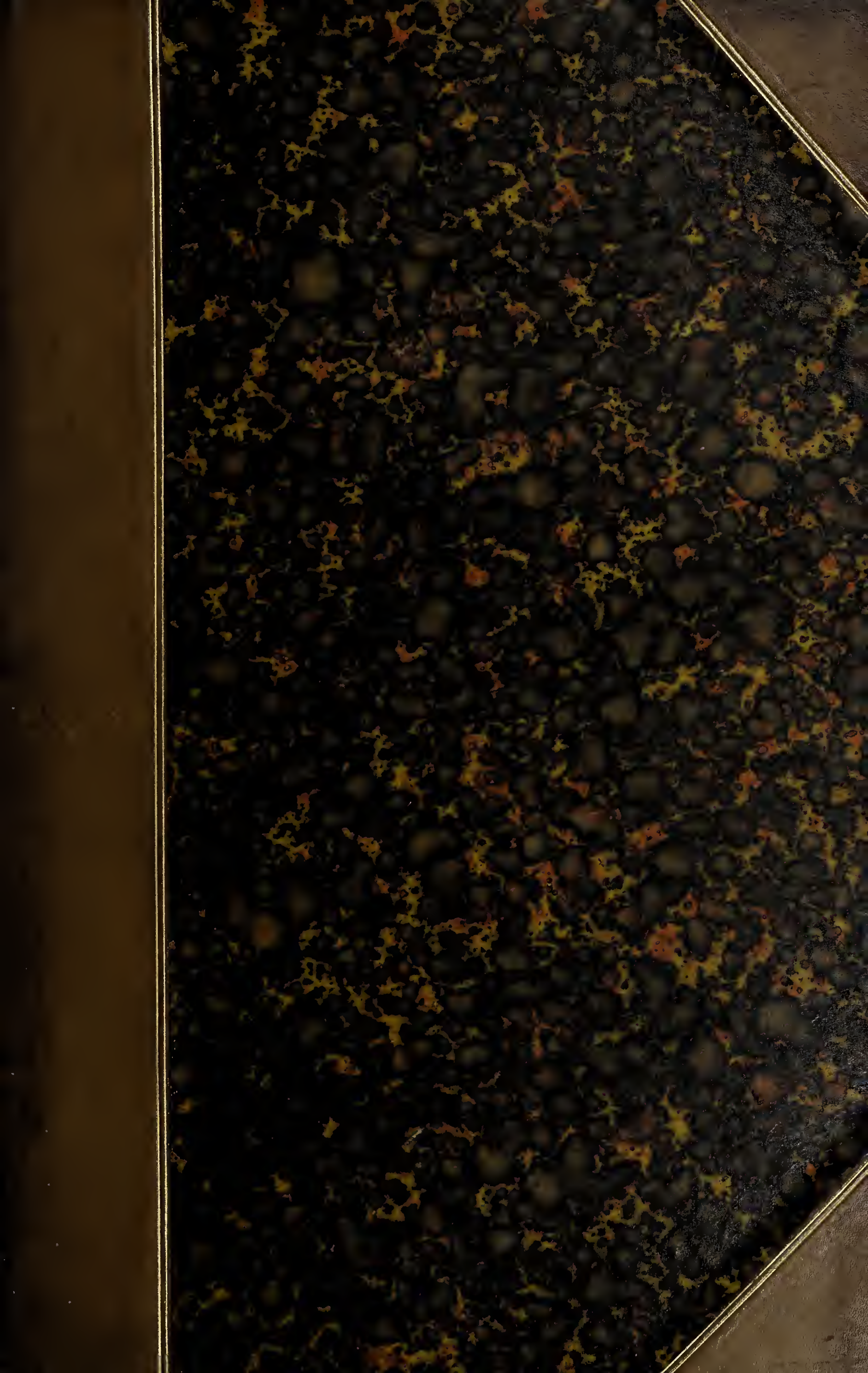






THE
ARCHÆOLOGY OF ROME.

BY

✓
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VOLUME I.

- I. THE PRIMITIVE FORTIFICATIONS.
- II. THE WALLS AND GATES OF ROME.
- III. THE HISTORICAL CONSTRUCTION OF WALLS.

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TO THE RIGHT HONOURABLE
WILLIAM EWART GLADSTONE,
FIRST LORD OF THE TREASURY, &c.

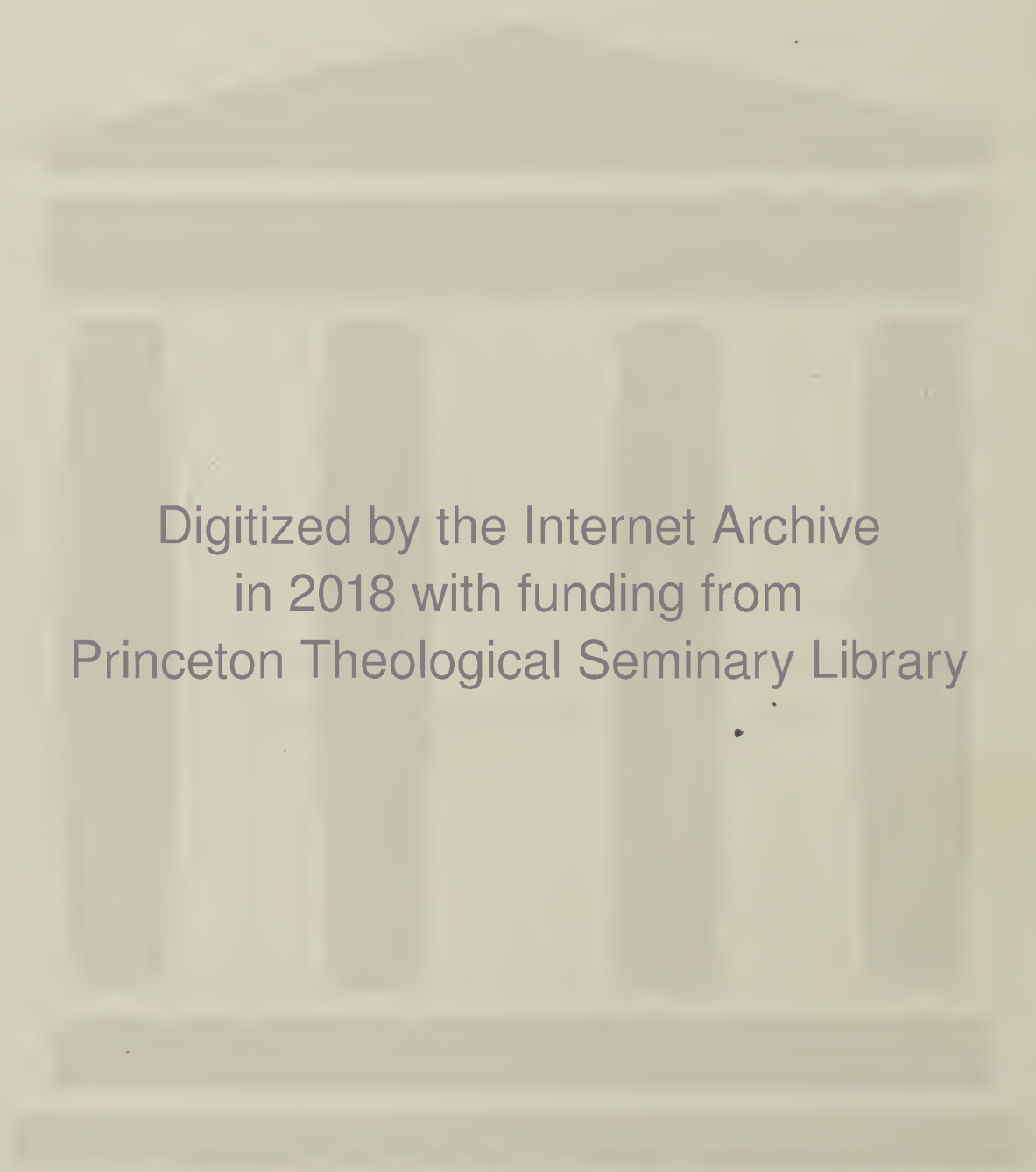
SIR,

It is extremely gratifying to me that I have your permission to inscribe this work to you. You have taken a kind interest in the book during its progress, and I have also had the pleasure of shewing you some of the Antiquities of Rome, and of explaining them on the spot, agreeably with the new method of the Rickman and Willis school of Archæology, which has never before been applied to them. What I at first saw dimly, has been made more and more clear by each succeeding excavation; and I am, therefore, naturally proud of associating the results of my labours with the name of one of the most accomplished scholars, orators, and statesmen of the day.

With much respect,

Your obedient and faithful servant,

JOHN HENRY PARKER, C.B.



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THIS work has now been eight years in hand ; had I been aware of the amount of labour that there was to be done, I should never have undertaken it at my age. I knew that there had been upwards of a hundred books on the Antiquities of Rome published before I began, and that some of them are deservedly of good reputation, but I also knew that in not one of them had the excellent method of Rickman and Willis,—the principles of the modern school of archæology,—been applied to the buildings of Rome. I did not at first anticipate that the careful examination of the construction and details of such buildings, which is a necessary part of this system, would produce such a complete change of ideas, nor occupy so much time and labour ; but I soon began to perceive that I had undertaken a far greater work than I had been aware of, and to doubt whether my life and health would be spared to complete it ; I therefore adopted the plan of making each chapter complete in itself, so that if anything happened to me, others would be able to go on with it on the same plan. I soon saw, indeed, the great results obtained by the excavations of Napoleon III. on the Palatine Hill, combined with those previously made in the time of the first Napoleon, at the expense of the Duchess of Devonshire, which had brought to light the platforms of the Temples of Concord, of Saturn, &c., at the north end of the Forum Romanum. These excavations have now been combined and united by the works carried on by the Italian Government, and the whole early history of Rome is coming out more and more clearly month after month. But the historical topography of Rome is not confined to the Palatine and the Forum Romanum, to which the Government restricts its works ; I saw the necessity of getting other excavations made and explorations carried on. I had begun my work on the plan of dividing Rome into districts, according to the *Regiones* of the *Regionary Catalogue* of the fourth century, but I encountered a formidable stumbling-block at the starting-point :—the first *Regio* is called the *Porta Capena*, but the site of that gate was not known, and none of the objects in this *Regio* could be placed until that was ascertained. With some difficulty, and after considerable delay, arising from procrastination, I obtained permission to dig on the spot where I saw that the gate must have been, by following the line

of the aqueducts that necessarily passed over it, to cross that deep valley between the Cœlian and the Aventine, and I found it exactly in the line where I had said two years before it must be. This gave me greater confidence to persevere, and I had now found that the first Regio of the Early Empire was situated in the interval between this principal southern gate of the THE CITY of the Kings, and the great southern gate OF ROME on the Via Appia, just one mile distant, and on the line of the ancient earthworks called the *mœnia*, on which the Wall of Aurelian was afterwards built.

This discovery also explained the plan of the fortifications of Servius Tullius; he made use of the previously-existing fortified villages on each of the seven hills, and combined them into one city, by connecting them together by means of a short *agger* and wall across the valley from one scarped cliff to another; (all fortifications of that period consist chiefly of scarped cliffs). On the eastern side only, where from the nature of the ground there would be no natural cliffs, he made his great *agger* a mile long (destroyed in 1872-3). Soon after that I heard that there was a vaulted chamber underground at the bottom of a well at the corner of the Circus Maximus. I went down into it, and examined it, and then took an architectural draughtsman down to have a plan and section made of it. I found that it was in part a natural cave, with a fine spring of water in it, and this with the situation indicated clearly that it was the Lupercal of Augustus. Soon after this I obtained the key of a cellar that I had long tried in vain to obtain, and here again I found from the construction of the walls of the time of the Kings, and the situation in the middle of the early City, that it must be a part of the great Prison of the Kings. I also found on examining the construction of the walls of the substructure of the great public building, on the southern slope of the Capitoline Hill, that it agreed with the account of it given by Varro, and the original part of it is one of the earliest buildings in Rome. I obtained permission to explore the subterranean chambers, and found them to be the Ærarium, or Public Treasury—under the Tabularium, or Public Record Office, with the Senaculum, or Senate-house behind it, and the Municipium over it. On the Palatine Hill, also, I had been able to trace the earliest wall of Rome, on three sides of an oblong space, at the north end of the Hill; evidently the ROMA QUADRATA of Tacitus and other authors, separated from the southern part of the hill by a wide and deep foss, which had been filled up to the level in the time of Domitian, but was brought to light again by the excavations of Signor Rosa for the Italian Government.

All these recent excavations combined to prove the substantial truth of the first book of Livy, and the corresponding chapters of Dionysius, confirmed also incidentally by Varro, and Vitruvius, and Plutarch, and indeed by nearly all the writers of the early Empire. It must be remembered that in the time when Niebuhr and Bunsen wrote, these walls were not visible, still less when the earlier historians wrote; they had been used as foundations for the great palaces of the Cæsars and for other buildings, both before and after that period, in many succeeding generations. There could not be better foundations to build upon than these walls of the Kings, in which each stone is a ton weight. They have only been brought to light within the last few years, some important parts only in 1871 and 1872. Portions of the wall of Roma Quadrata can now be seen on three sides of it, and the great foss can be distinctly traced on investigation, though not seen at first sight, because walls of the time of Domitian have been built across it to make a level surface, on which stand the remains of a temple towards the west end, and of the great Basilica Jovis towards the east end. The cliffs on both sides of the foss are supported by walls of different periods.

The construction of each period is soon ascertained by historical dated examples, and experience has taught the Archæologists that the construction of the same period was always the same, where the same building-materials are found. Construction thus becomes stronger evidence than books, because books are always liable to errors of transcribers, or the misunderstanding of a passage from the same word being used in different senses. It is no reproach to those who have gone before to say that the recent excavations and explorations have shewn them to be wrong in many points: if they could have seen what we now see, they would have arrived at the same conclusions that we do.

Archæology differs from history in this respect, that it has to do only with existing remains explained by history, while that has to do with the things that have been, without regard to whether there are any visible remains or not. Antiquities are generally understood to mean objects of ancient art, one important part of archæological evidence, but a part only; the exact knowledge of the locality and the ancient earthworks are also important branches of archæological evidence.

ASHMOLEAN MUSEUM, OXFORD,
October, 1873.

CONTENTS.

	PAGE
A Chronological Table of Buildings in Rome and Contemporary Events	1—22
Buildings in Rome mentioned on Roman Coins—By W. S. W. Vaux, Esq.	23—27

CHAPTER I.

THE PRIMITIVE FORTIFICATIONS.

SECTION		
I.	The Ancient Earthworks	1—18
II.	The Pomœrium of the Kings	19—22
III.	The Palatine	23—44
IV.	The Capitoline Hill	45—48
V.	The Aventine added to the City, A.U.C. 30	49—51
VI.	The Cœlian added, A.U.C. 147	52—55
VII.	The Quirinal, Viminal, and Esquiline added, A.U.C. 153, and the Enceinte completed by Servius Tullius	56—66
VIII.	The Gates of Servius Tullius	67—83
Appendices—	Porta Flumentana, Porta Carmentalis—Fortification— Port of Rome—the Lupercal of Augustus—the Cave of Picus and Faunus, and of Cacus (?)—the Mamertine Prison—Boys nurtured by Wolves—Streets of Rome—Jerusalem (for com- parison)	84—120

CHAPTER II.

THE WALLS AND GATES OF ROME.

I.	Extension of the Fortifications made by Sylla and the Early Emperors	87—90
	The Later Fortifications—The Pomœrium of the Republic and the Empire	91—97
	Appendix—Pomœrium of Augustus—Cippi	98—106
II.	The Gates of Rome in the time of Vespasian	107—117
III.	Historical Notices of successive Repairs of the Walls	118—129
IV.	Circuit of the Walls	130—160
Appendices—	Names of the Gates—The Vatican—Ancient Streets and Roads	161—191

CHAPTER III.

THE DIFFERENT MODES OF CONSTRUCTION EMPLOYED IN ANCIENT ROMAN BUILDINGS, AND THE PERIOD WHEN EACH WAS FIRST INTRODUCED.

I.	Building Materials	1—3
	Construction	4—25
	Opus Lateritium—Brick-Stamps—Polygonal Masonry	26—32
Appendices—	Opus Quadratum—The Capitolium, containing the Ærarium, Tabularium, Senaculum, Municipium	33—48
	Temples of Jupiter Feretrius and Capitolinus	49—54
	Opus Reticulatum—Houses of Hortensius, Augustus, Tiberius, Caligula	54—62
II.	On the Details of Roman Architecture. By R. P. Pullan.—Notes	67—90
Appendix—	How large blocks of stone were raised	91, 92

IV. TIME OF SYLLA AND JULIUS CÆSAR, B.C. 100 TO B.C. 30.

Buildings in Rome.

A.U.C. B.C.

653 100 **Palace of Sylla (?) on the Pineian Hill (a part of which now called the Muro Torto). **1**

663 90 **Temple of Fortuna Virilis, on the bank of the Tiber, rebuilt (?), (now S. Maria Ægyptiaca.) See A.U.C. 189. **2**

*Temple of Mater Matuta, rebuilt (?) in the Forum Boarium (now S. M. in Cosmedin), see *ante*, B.C. 398 and B.C. 197. **Columns. **3**

Temple of Hercules Custos (in the Circus Flaminius) (Ovid. Fast., vi. 209). **4**

668 85 The Curia Hostilia, built (?) by Tullus Hostilius (Dio, 40, 50); burnt in 699;—rebuilt in 702, and called after Julia (Dio, 44, 5). **5**

675 78 Three temples under one roof built on the Capitol, which had been burnt in 668, and begun by Sylla, finished by Q. Lutatius Catulus, the Consul (Dionys., iv. 61). **6**

Tabularium on the Capitol and *Substructure of the Intermon-tium, partly rebuilt, after the fire in 668. (Inscription, Orell. 31, 3267.) (See A.U.C. 364.) **7

Basilica Æmilia, built by Marcus Æmilius Lepidus, Consul. Numidian marble brought for the house of Marcus Lepidus. (Domus pulchrior non fuit Romæ; Plin., xxxvi. 24, 4). **8**

687 66 Temple of Felicitas, begun by L. Licinius Lucullus, finished in 707 by M. Æmilius Lepidus. **9**

688 65 Temple of Minerva, built by Pompey, in the Forum Transitorium, (afterwards rebuilt by Nerva). **10**

692 69 **Bridge of Fabricius, built by Fabricius, curator viarum (Dio, 37, 45, Inscription *in situ*.) **11**

694 59 Theatre of M. Scaurus, the Ædile, with wooden seats, and 300 marble columns. (Plinii, Nat. Hist., xxxvi. 24, 7.) **12**

697 56 Theatre and Courts of Pompey (Inscriptio Ancyrina, Dio, iv. 8, &c.) **13**

Temple of Venus Victrix, built by Pompey near his Theatre. **14**

698 55 Basilica Pauli, built by Æmilius Paulus, Consul (Cicero ad Atticum, lib. iv. epist. 16). (See A.U.C. 718.) Plin. xxxvi. 102. **15**

House of Mamurra, on the Cœlian Hill, adorned with marble columns (Plin. xxxvi. 48). **16**

Contemporary Events.

A.U.C. B.C.

653 100 Birth of C. JULIUS CÆSAR.

Triumph of Marcus and Catulus (Eutrop. v. i.)

95-46 *Cato of Utica*.

656 97 Human sacrifices forbidden by the Senate.

663 90 Social or Marsic War (Fasti Cap.) ends in 88—Sylla Consul.

664 89 Rome taken by Sylla, the Porta Esquilina burnt.

Civil War of Marius and Sylla.

665 88 Rome taken by Marius and Cinna. First war with Mithradates, lasts until 84.

87-57 *Catullus, poet*.

86-34 *Sallust, historian, born*.

667 86 Death of Caius Marius.

668 85 The Capitolium burnt.

670 83-30 Mark Antony, general.

671 82 SYLLA re-appointed Dictator. He dies in 78.

81 Triumph of Pompey for success in Africa.

76 to A.D. 4 *Asinius Pollio, historian*.

679 74 Bithynia and the Cyrenaica become Roman Provinces.

Second or Great War with Mithradates, lasts until 63, in the Consulship of Cicero.

73 The Servile War begins.

70-19 *Virgil, poet*.

Census, 450,000 Roman citizens.

685 68 Metellus subdues Crete.

686 67 Crete created a Roman Province.

66 Pompey defeats Mithradates.

Cicero advocates the cause of Pompey.

688 65 Catiline's first conspiracy; second in 62; death in 63.

65-9 *Horace, poet*.

689 64 Pompey conquers Jerusalem, and makes Syria a Roman Province.

690 63 Suppression of Catiline's Conspiracy. Julius Cæsar and Mark Antony Consuls.

Birth of Octavius, afterwards called Augustus.

63-12 Marcus Vipsanius AGRIPPA.

61 to A.D. 45. *Seneca, philosopher*.

693 60 The First Triumvirate (Julius Cæsar, Pompey, and Crassus).

59 *Diodorus Siculus, Greek historian*. Julius Cæsar Consul.

695 58 Julius Cæsar invades Gaul; his campaigns last to B.C. 50.

698 55 Julius Cæsar invades Britain.

The Campus Martius begun to be built upon.

The Triumvirs meet at Lucca.

PHOTOGRAPHS—

1 Nos. 1, 2, 364, 762, 1533.

2 No. 304.

PHOTOGRAPHS—

7 Nos. 122, 578.

11 No. 162.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C. B.C.		A.U.C. B.C.	
701	52 Temples of Isis and Serapis destroyed by order of the Senate, and rebuilt outside of the Pomœrium in 711 (Dio, 40, 47, & 47, 15.) 1	54-13	<i>Tibullus, poet.</i>
702	51 The Curia Hostilia burnt, with the body of Clodius; rebuilt by Faustus, the son of Sylla (Dio, 40, 50). (See A.U.C. 710.) 2	691	53 Marcus Crassus defeated by the Parthians.
703	50 House of Hortensius on the Palatine built (afterwards bought by Augustus) (Suetonius in Octav. 72). 3	52-10	<i>Propertius, poet.</i>
706	47 *Forum of Julius Cæsar made (Dio, 43, 22). 4	702	51 Gaul made into a Roman Province.
	Temple of Venus (Genitrix) in the Forum of Cæsar consecrated (Dio, 43, 22). 5	50	<i>Lucretius, poet.</i>
	A Wooden Amphitheatre made (Dio, 43, 22). 5	703	50 Temple of Quirinus burnt.
708	45 *Circus Maximus, enlarged by Julius Cæsar, furnished with seats of honour of Numidian marble, and seats for 260,000 persons, and a **street with shops made by the side of it (Plin. xxxvi. 102). 6	704	49 Civil War between Cæsar and Pompey.
	Naumachia made in the Campus Martius (Dio, 43, 23).		Julius Cæsar Dictator.
710	43 Curia Hostilia, near the Comitium, again destroyed, and rebuilt, and named after Julia (Dio, 47, 19); finished and consecrated A.U.C. 725 (Dio, 51, 22). Basilica Julia(?). 7	705	48 Pompey defeated at Pharsalia.
	A new Temple of Concord begun (Dio, 44, 4). 8		<i>C. Valerius Catullus, poet.</i>
711	42 Temple of Isis and Serapis ordered to be rebuilt by the Triumvirs (Dio, 47, 15). 9		The Pomœrium enlarged.
712	41 **A Temple of Mars Ultor built by Augustus, after having avenged the assassination of Julius Cæsar; —consecrated A.U.C. 767, A.D. 14. (See also A.U.C. 734.) 10		<i>Quintus Cornificius, friend of Catullus and enemy of Virgil.</i>
713	35 *Tabularium; the eastern part rebuilt. 11	47	Cæsar subdues Egypt, and confirms Cleopatra on her throne.
717	36 Villa Cæsarum "ad gallinas," or Villa Liviæ ad primam portam (Dio, 48, 52; Suetonius in Galba, c. i.; Plinii, Nat. Hist., xv. 40).		An army of Jews in alliance with the Romans.
718	35 Basilica Pauli Æmilii finished; begun A.U.C. 698 (Plin. xxxvi. 102). (Medal). 12		Cæsar is reconciled to Pompey.
	*Theatre of Marcellus begun, finished B.C. 14 (Plin. vii. 121). 13	44	<i>Cornelius Nepos, biographer.</i>
	The house of Augustus on the Palatine, which he had roofed in, dedicated to Apollo, and additions made (Dio, 49, 15); A.U.C. 726 (ibid., 53, 1). 14		Caius JULIUS CÆSAR assassinated by Brutus, aged 56.
			<i>Aulus Hirtius, historian.</i>
		710	43 <i>M. Tullius Cicero, orator and philosopher, is put to death.</i>
			The Second Triumvirate (Octavius, Antony, and Lepidus).
		43 to A.D. 18	<i>Ovid, poet.</i>
			Battle of Philippi, M. Junius Brutus and Cassius defeated.
			Cell of Jupiter Capitolinus in the Temple of Victory struck by lightning (Dio, 45, 17).
		40	<i>C. Asinius Pollio, orator and histor.</i>
			<i>L. Cassius Hemina, historian.</i>
			Marcus Antonius accompanies Cleopatra to Egypt; returns and marries Octavia, the sister of Augustus.
		36	<i>Nicolaus Damascenus, Gr. histor.</i>
		716	The wooden cottage of Romulus, on the Palatine, burnt (Dio, 48, 43).
		718	Statues placed in the Temple of Concord by Antony (Dio, 49, 18).
		35	Virgil writes his Georgics.
			Horace publishes his Satires.
			Antony lavishes kingdoms on Cleopatra.

PHOTOGRAPHS—

3 No. 2250.**4** Nos. 777, 778.**6** Nos. 101, 113, 746, 747.

PHOTOGRAPHS—

11 No. 122, 578.**13** No. 171.**14** Nos. 2249, 2250.

V. TIME OF THE EMPIRE. PART I. AUGUSTUS TO HADRIAN,
B.C. 30 TO A.D. 136.

Buildings in Rome.

A U.C. B.C.

- | | | | |
|-----|----|--|----|
| 723 | 30 | Temple of Minerva Chalcidica (Athenæus in Dio, 51, 22). | 1 |
| | | Temple of Divus Julius in the Forum, begun by the Triumvirs, now consecrated—Heroum (Dio, 47, 18). | 2 |
| | | Curia Julia consecrated (Dio, 47, 19, 51, 22). Basilica Julia (?). | 3 |
| | | Macellum Augusti. (Medal of Augustus.) | 4 |
| | | Triumphal Arch of Augustus in the Forum (Dio, 51, 19). | 5 |
| | | **House of Hortensius, in the Arx of Romulus, purchased by Augustus, and added to by order of the Senate (Suetonius in Octav., 72; Dio, 53, 16; Ovidii Fasti, iv. 954). | 6 |
| 725 | 28 | **Mausoleum of Augustus begun (Dio, 53, 30). | 7 |
| | | **Tomb of Caius Cestius, in the form of a pyramid. (Inscr.) | 8 |
| | | Temple of Apollo, dedicated by Augustus, in that part of the Palatine Hill where his house was situated, and near the Haruspicium, with a porticus, an area in front of it, and a Library (Dio, 53, 1; Suet., Octav., 29). | 9 |
| | | Temple of Jupiter Feretrius rebuilt. See A.U.C. 4. | 10 |
| 728 | 25 | *Septa Julia, in the Campus Martius, finished and consecrated by M. Agrippa (Dio, 53, 23). | 11 |
| | | Porticus Neptuni (Argonautæ), (Dio, 53, 27). | 12 |
| 729 | 24 | **Bridges of Æmilius and Cestius Lepidus built. (Inscriptions.) | 13 |
| 720 | 23 | Temple of Jupiter Tonans, on the slope of the Capitol, commenced by Augustus, with a bell to it (Dio, 54, 4), (finished and consecrated, A.U.C. 732; Suet., Octav., 29 and 91). | 14 |
| 734 | 19 | Temple (?) or Tabernacle of Mars Ultor, on the Capitol, built in imitation of that of Jupiter Feretrius (Dio, 54, 8). | 15 |
| | | Many public buildings erected (Suetonius, Octav., 29). | |
| | | The Forum [of Augustus] enlarged, with the Temple of Mars Ultor in it (Suet., Octav., 29). | |
| 736 | 17 | Temple of Quirinus, on the Quirinal, rebuilt (Vitruvius, iii. 1). | 16 |
| 738 | 15 | **Temple of Saturn, rebuilt by Munatius Plancus, (against the Ærarium at the foot of the Capitol), (Suet., Octav., 29). | 17 |
| | | Amphitheatre built by Statilius Taurus (Suet., 29; Dio, 51, 22). | |
| 739 | 14 | Porticus and Basilica of Caius and Lucius, Porticus of Livia and of Octavia, and Theatre of Marcellus, built by Augustus (Suet., Octav., 29; Vitruvius I.) See A.U.C. 706. | 18 |

Contemporary Events.

A.U.C. B.C.

- 723 30 OCTAVIUS CÆSAR AUGUSTUS, SOLE
MASTER OF ROME AND RULER OF
THE WORLD.
Assisted by Mæcenas and Marcus
Agrippa, he adorns the City.
The gate of Janus is closed (Dio,
51, 20).
Cornelius Gallus, the friend of
Virgil, is præfect of Egypt; he
is disgraced for mis-government,
and kills himself.
Horace published his second book
of Satires and his Epodes.
- 725 28 Egypt made a Roman province.
Trophies placed in the Temples
of Jupiter Capitolinus, Juno, and
Minerva.
A golden image of Cleopatra placed
in the Temple of Venus. She was
also called Isis (Dio, 51, 22).
- 727 26 Octavius resigns his power, which
is given to him again by the
Senate. He is proclaimed Em-
peror as Augustus, being then
Consul for the seventh time with
Marcus Agrippa.
28 *Terentius Varro, grammarian, dies,*
æ. 89.
Vitruvius writes on Architecture.
25 Marcus Marcellus marries Julia, the
daughter of Augustus.
- 731 22 Death of Marcus Marcellus.
- 733 21 Marcus Agrippa marries the widow
Julia, and is appointed the repre-
sentative of Augustus.
- 734 20 Birth of Caius, grandson of Augustus.
19 *Velleius Paterculus, historian.*
18 *Tibullus, poet.*
17 Birth of Lucius, grandson of Augus-
tus.
- 737 16 Caius and Lucius, sons of Mar-
cellus and Julia, adopted as
Cæsars.
Death of Marcus Agrippa, æ. 51.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C. B.C.		A.U.C. B.C.	
739	14 **Theatre of Marcellus consecrated; Porticus of Livia (Suet., Octav., 29), begun A.U.C. 718 (Inscriptio Ancyrina). 1 Theatre of Balbus, built by C. Cornelius Balbus (Suet., Octav., 29). 2	738	15 A great fire, extending from the Porticus Æmilia to the Temple of Vesta. Institution of magistrates to look after the safety of the games (Dio, 55, 8, and 60, 12).
742	11 **Two Obelisks brought from Egypt, erected in the Circus Maximus and the Campus Martius. (Inscription.) (Plin. xxxvi. 69—71.) 3	14	<i>Æmilius Macer, poet.</i>
747	6 Diribitorium of Agrippa, consecrated by Augustus (Dio, 55, 8; Plin. xvi. 201). 4 Porticus Vipsania of Agrippa, finished by Augustus (Dio, 55, 8). 5 Temple of Concord, the restoration begun by Tiberius and Drusus (Dio, 55, 8); dedicated 764. 6 Temple of Livia dedicated (Dio, 55, 8). 7	741	12 Augustus is made Pontifex Maximus.
749	4 **Aqua Marcia, reinforced with the Aqua Augusta (Frontinus, c. 12). 8 **Arch of Augustus at the Porta Tiburtina. (Inscription.) 9 All the Aqueducts repaired. Inscription <i>in situ</i> on the Porta Tiburtina (Plin. xxxvi. 122).	742	11 Death of Octavia, the sister of Augustus.
750	3 **Forum of Augustus, the largest and the most handsome in Rome (Plin. Hist. Nat., xxxv. 10, xxxvi. 24). 10 Naumachia of Augustus in the Trastevere (Frontinus, c. 11). 11	743	10 Birth of Claudius, son of Drusus, afterwards Emperor.
749	4 JESUS CHRIST IS BORN AT BETHLEHEM in this year, according to some authorities.	744	9 Drusus sent against the Germans, and is killed by a fall from his horse, æt. 30. <i>Livy's history ends with this event.</i> The Pomœrium enlarged (Dio, lv. 6). 8 Tiberius succeeds Drusus, and makes peace with the Germans. 8 <i>Death of Horace and his patron Mæcenas.</i> 7 <i>Dionysius Halicarnass., Greek hist.</i> 3 Birth of Galba, afterwards emperor. 2 Julia banished to the island of Panditaria.
A.U.C. A.D.		A.U.C. A.D.	
757	4 Temple of Castor and Pollux, or of the Dioscuri in the Forum, rebuilt by Tiberius (Dio, 55, 27). 12 House of Augustus restored, at the public expense, after a fire. He resided both in his private house and in the public apartments (Dio, 55, 12). 13	753	0 BIRTH OF JESUS CHRIST OUR SAVIOUR, According to the common era.
763	10 **Arch of Dolabella on the Cœlian. (Inscription.) 14	755	2 A great flood in Rome; a bridge carried away, and the water remained in the City several days. Peace between Rome and Parthia. Lucius Cæsar dies at Massilia (or Marseilles), æt. 19.
764	11 Temple of Concord dedicated (Dio, 56, 25). See A.U.C. 537. 15 Macellum Livianum. (Medal.) 16 Meta in the Circus Maximus, gilt. 17 Temples [or Altars?] of Ceres, Liber, and Libera, near the Circus Maximus, voted by Aulus Postumius (Plin. xxxvi. 154); commenced by Augustus (Tacit. Annal., ii. 49). (Now in the church of S. Maria in Cosmedin.) 18 Temple of Flora rebuilt and consecrated. 19 Temple or Arch of Janus, rebuilt and consecrated. See A.U.C. 492. 20 **Temple of Spes, partly rebuilt and consecrated. See A.U.C. 492. 21	756	3 A fire on the Palatine (Dio, 55, 12). 4 Caius Cæsar dies in Lycia, æt. 22. Augustus adopts Tiberius, æt. 45. Asinius Pollio dies at Tusculum. 6 Judæa made a Roman province. 8 <i>Diodorus Siculus, historian.</i> Defeat of Quintilius Varus, and loss of eastern Germany. Birth of Vespasian, afterwards Emperor. 9 Submission of Dalmatia.
		763	10 Temple of Mars, in the Campus Martius, struck by lightning (Dio, 56, 24). Inscriptio Ancyra.

PHOTOGRAPHS—

- 1 No. 171.
3 Nos. 649, 1448.
9 No. 21.
10 Nos. 265, 266, 844, 1465.
12 Nos. 911, 912, 1684.

PHOTOGRAPHS—

- 14 No. 67.
15 Nos. 67, 72.
20 No. 646.
21 No. 197.
22 No. 1117.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C.	A.D.	A.U.C.	A.D.
769	16	**Temple of Fors Fortuna near the Tiber consecrated (Tacit. Annal., ii. 41).	1
		Theatre of Pompey finished (Suet., Tiberius, 47).	
		**THE LUPERCAL, (i. 5; Dionys., i. 32); "Lupercal feci." (Inscr. Ancyra.)	2
765	12	*Porticus Liviae dedicated (Dio, 56, 27); commenced B.C. 15.	3
767	14	Tabernacle or Temple of Mars Avenger (Ultor) consecrated.	4
769	16	*Palace of Augustus and Tiberius on the Palatine (Dio, 50, 57; Tacit. Hist., i. 27.)	5
		Arch of Tiberius on the Clivus of the Capitol, at the Temple of Saturn (Tacit. Annal., ii. 41).	6
		Restoration of numerous temples.	
773	20	**Castra Prætoria begun. (Medal of Claudius.)	7
775	22	**Mamertine Prison enlarged (?) (Inscription <i>in situ</i>).	8
	23	Restoration of Basilica Æmilia.	9
784	31	A Senaculum at the Temple of Concord (Dio, 58, 11).	10
789	36	Temple of Augustus on the Palatine, (Suet., Tiberius, 4,) begun by Livia (Plin., xii. 42; Dio, 56, 46).	11
792	39	Great Building era in Rome.	
		*Domus Caligulae at north end of Palatine near the Forum, with **bridge (Suet., Tib., 23, 41).	12
		Macellum Augusti. (Medal.)	13
794	41	**Obelisk in the Vatican Garden, erected by Caligula to Augustus and Tiberius. (Inscription <i>in situ</i> .)	
		Temple of Mars consecrated by Claudius (Dio, 60, c. 5).	
	42	Harbour built at Ostia.	14
803	50	**Aqueduct VIII. Claudius, and IX. Anio Novus, begun (Frontinus, c. 13); finished A.U.C. 833.	15
		**Arcade of the Aqua Virgo, restored by Claudius. (Inscrip.)	16
		Carceres in the Circus, made of marble (Suet., Claud., xi. 21).	17
		**Arch of Drusus. (Medal of Nero Claudius Drusus.)	18
805	52	Two houses of Caius Cæsar (Plin. Hist. Nat., xxxvii. 24, 7).	19
		Circus of Caius and Nero in the Vatican, with **the Obelisk (Plin., xxxvi. 15).	20
		Macellum Neronis (Dio, 61, 18).	21
767	14	Augustus proposes to build of brick and not of marble (Dio, 56, 30). Death of Augustus. TIBERIUS, EMPEROR.	
774	17	Triumph of Germanicus. Death of Livy, the historian.	
	18	Death of Ovid and Tibullus.	
	19	The Jews banished from Italy.	
	20	Agrippina, widow of Germanicus, arrives at Rome.	
	23-79	Pliny the Elder, author of Nat. Hist.	
	15-26	Valerius Maximus, historian.	
780	27	Tiberius retires to Capri.	
	28	Death of Julia, grand-daughter of Augustus.	
781	28	Thrace becomes a Roman province. THE BAPTISM OF CHRIST.	
	29	Death of Livia, æt. 86.	
	30	C. Velleius Paterculus, historian.	
	32	THE CRUCIFIXION.	
	33	Agrippina and her son Drusus put to death.	
	34	Great Fire in the Circus and on the Aventine (Tacit., vi. 45; Dio, 58, 26).	
	34-62	Persius, poet.	
	37	Celsus, physician.	
790	37	Death of Tiberius, æt. 78. Birth of Nero. CALIGULA, EMPEROR. Persecution by Herod in Judæa. S. James Major, martyr.	
	40-90	Quintilian, orator and grammarian.	
794	41	Caligula slain, æt. 29. Birth of Titus. CLAUDIUS, EMPEROR.	
	42	Philo-Judæus, historian. Columella, writer on husbandry.	
796	43	Claudius goes to Britain.	
	43-104	Martial, epigrammatist.	
	44	Death of Agrippa, king of Judæa.	
	45	Pomponius Mela, geographer.	
801	48	Messalina, wife of Claudius, is put to death. Lycia is made a Roman Province.	
	48	Agrippa the Younger succeeds to his Uncle Herod in Judæa.	
	49	Q. Curtius Rufus, historian.	
802	49	Marriage of Claudius and Agrippina. **Tomb of T. Claudius Vitalis, near the Arches of Nero. (Inscription.) **Tomb of the Aterii.	
	50	Lucretius, poet. **Tomb with Columbaria of the Officers of Cæsar's household. (Inscription <i>in situ</i> .)	
803	50	Nero adopted as a Cæsar, æt. 14.	
804	51	Claudius goes into Britain.	
806	53	Nero married to Octavia, æt. 11.	
807	54	NERO, EMPEROR, æt. 17. S. Paul at Corinth before Gallio.	
808	55	Death of Britannicus, æt. 14.	

PHOTOGRAPHS—

- 1 No. 304.
3 No. 702.
4 No. 816.
7 Nos. 11, 12, 13, 14, 15, 180.
8 Nos. 580, 777, 778.

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- 12 Nos. 1447, 1451.
15 Nos. 1002 to 1005.
16 Nos. 82, 83.
18 Nos. 59, 1078.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C.	A.D.	A.U.C.	A.D.
810	57	**Lavacrum of Agrippina on the Viminal. (Inscription.) ¹	1
		**House of Pudens on the Viminal.	2
		**House of Nero (Plin., xxxvii. 24, 7; Tacit. Annal., xv. 39 and 42), called <i>Domus transitoria</i> before the fire, <i>Domus aurea</i> after the rebuilding. The Colossus, 120 ft. high, was in the vestibule of it.	3
		Arcade of Aqueduct of Nero on the Cœlian (Frontinus).	4
		A porticus or arcade built in front of the houses and shops by Nero (Tacit. Annal., xv. 43; Suetonius, Nero, 15 and 31)	5
815	62	**Thermæ Neronis begun (Crassus et Bassus Coss.; Suetonius in Neron., 12), restored by Alexander Severus (Lampridius in Alex. Sev., 25).	6
		Temple or Shrine of Janus. (Medal.)	7
		Arch of Nero. (Medal.)	8
817	64	Amphitheatre and Lacus of the Golden House of Nero (Dio, 62, 15).	
818	65	Claudian Aqueduct and Anio Novus completed. (Inscriptions.)	9
822	69	Temple of Jupiter Capitolinus, rebuilt from the foundation ^f . (Medal.)	10
		Temple of Vesta. (Medal of Vespasian.)	11
		House and Chapel of S. Clement (?) (Anastas. xcvii. 335).	
826	73	Temple of Peace near the Forum, built by Vespasian (Plin., xxxvi. 24, 1; Suetonius in Vespasian., c. 9; Dio, 66, 15).	12
		Temple of Claudius on the Cœlian begun by Agrippina, completed by Vespasian, dedicated by Titus (Sueton., 9).	13
		**The Colosseum in progress. Finished, A.D. 96.	14
		Prætorian Camp finished by Titus. See ante, A.D. 20.	15
		Thirty-seven Gates of Rome mentioned by Pliny (Nat. Hist., iii. 9).	
831	78	**Thermæ of Titus (Suetonius in Tito).	16
		(Churches of S. Silvester and S. Lucia in Selci afterwards made in chambers of these Thermæ).	17
832	79	Temple of Jupiter Custos. (Tacit. Hist., iii. 74.	18
		Villa Publica (Medal of Titus). (Plin. xxxiii. 25.)	19
809	56	Enlargement of the Pomœrium, so as to include the Aventine, and a third part of the Campus Martius in THE CITY.	
	57	The Christians persecuted by Nero (Suetonius in Nero, 15).	
	59	Nero puts his mother Agrippina to death.	
		S. Paul at Cæsarea before Festus and Agrippa.	
814	61	Queen Boadicea conquered.	
		CARACTACUS, the British chief, is carried prisoner to Rome, with all his family as hostages (Tacit. Annal., xii. 36, 37).	
		S. Paul at Rome.	
		Eutropius, historian.	
		Tacitus, historian.	
		Statius, poet.	
815	62	Octavia is slain in her 20th year.	
		Nero marries Poppæa Sabina.	
		Temple of Claudius built at Carriodunum in Britain (Tacit. Annal., xiv. 31).	
817	64	Great Fire of Nero, burning nine days, attributed to the Christians (Suetonius in Neron., 16; Tertulliani Scorp., 14; Dio in Neron.)	
		THE FIRST PERSECUTION OF THE CHRISTIANS.	
818	65	SS. PETER AND PAUL, MARTYRS (Catalog. Vet. Pontif.; Eusebii Chronicon; Eusebii Hist. Eccles., ii. 25; Tertulliani Scorp., 15; Sulpit. Sever. Hist. S., xi. 41).	
		Lucan and Seneca put to death.	
		Apollonius of Tyana comes to Rome.	
819	66	S. Linus, of Volterra, first Pope (Papa), according to Baronius.	
820	67	S. Clement, a Roman, Bishop of Rome, according to some authorities.	
		C. Petronius Arbiter, satirist.	
821	68	Nero stabs himself.	
		GALBA, Emperor.	
	69	Famine in Judæa.	
	70	FLAVIUS VESPASIANUS AND TITUS VESPASIANUS, Emperors.	
823	70	The Flavian Emperors celebrate the capture of Jerusalem.	
		The temple of Janus is closed.	
		Josephus, Jewish historian.	
		Suetonius, historian.	
	77	Silius Italicus, poet.	
	78	S. Cletus or Anacletus, of Athens, Bishop of Rome.	
		Agricola in Britain.	
832	79	Death of Pliny the Elder at Pompeii on Vesuvius, æt. 56.	
		Pliny the younger then 18.	

^f The foundations being underground were not rebuilt; these have now been excavated, and they belong to the original Temple of the Tarquins. See A.U.C. 220.

PHOTOGRAPHS—

- 1 Nos. 181, 182, 376, 2120 to 2123.
2 Nos. 178, 1733, 1734.
3 No. 326.

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- 4 Nos. 66, 72, 78.
8 Nos. 62, 74, 75, 78, 529, 1004, 1052, 1514, 1531, 1532, 1555.
12 Nos. 897, 2076.
14 Nos. 184, 185, 367, 1194, 1195.
16 Nos. 939, 940, 941, 942.
17 No. 1341.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C.	A.D.	A.U.C.	A.D.
		833	80
	Temple of Isis and Serapis built (Spartianus in Caracall., 9). 1		**Meta Sudans in front of the Flavian Amphitheatre or Colosseum. (Medal.)
	*Temple of Vespasian and Titus in the Forum. (Inscription.) 2		Ludus Matutinus. (Inscript. Orell., 2553, 2554, 6520.)
833	80		Great Fire in the City (Dio, 66, 21, 24; Plinii Epist. vi. 16, 20; Suetonius in Vespasian., 8, 7). The Serapeum—Iseum—Septa—Templa Neptuni—Therm. Agrippæ—Diribitorium—Theatrum Balbi—Scena Pompeii—Pantheum—Ædificia Octaviæ, with the Library and Temples near, and Ædes Jovis in Capitolio, destroyed or damaged (?).
	**Arches of Nero on the Cœlian completed. (Inscription.) 3		
	*House of Sallust. 4		
	The Colosseum dedicated by Titus (Dio, lxvi. 25). Meta Sudans in front of the Colosseum. (Medal.)		
834	81	834	81
	Temple of the Gens Flavia on the Quirinal, called the House of Sallust (Suetonius in Domitian, 5), and brick-stamps in the wall. 5		Death of Titus.
	Stadium, Odeum, Naumachia, built (Suetonius, c. 5). 6		DOMITIANUS, EMPEROR.
	Thermæ, on the Esquiline, of Titus and Domitian (Suetonius in Domitian). 7		SECOND PERSECUTION OF THE CHRISTIANS.
	The streets widened.		<i>S. John exiled to Patmos.</i>
	The Capitolium and other ruined buildings rebuilt (Suet., c. 5). 8		<i>Terentius Maurus, grammarian.</i>
	The Circus Maximus enlarged. 9		82 <i>Juvenal, poet.</i>
	Temple of Jupiter Custos on the Capitoline Hill (Suet., c. 5). 10		<i>Statius, poet.</i>
83	**Arch of Titus finished. (Inscription.) 11		85 <i>Plutarch, historian.</i>
85	Arch of Domitian, with equestrian statue. (Medal.) 12	839	86
	Palace and Basilica of Domitian on the Palatine. 13		Domitian assumes the surname of Germanicus.
847	94		Polished marble mirrors made in the porticus or corridor of Domitian on the Palatine (Suetonius, 13).
	Tomb of Sulpicius Maximus at the Porta Salaria. 14		A bronze Janus, or <i>arcus quadri-</i>
849	96		<i>frons</i> , erected in each Regio of Rome (Suetonius, 13).
	**Forum of Nerva, and Temple of Pallas or Minerva Chalcidica, finished A.U.C. 852. (Inscript. ap. Nardini, t. i. p. 318.) 15	847	94
	**Arcade of Marcian Aqueduct restored by Vespasian. (Inscript.) 16		<i>Frontinus appointed to the care of the Aqueducts.</i>
849	98		SS. Clement and Domitilla, M.M.
	Circus Maximus enlarged. (Medal of Trajan.) 17		95 <i>Quintilian, rhetorician.</i>
	Aqueduct X. Trajana Sabatina. 18	849	96
	**Thermæ of Trajan and Titus. 19		NERVA, Emperor.
	Thermæ of Sura. 20		
864	111	851	98
	**Forum of Trajan. (Medals.) 21		TRAJANUS (Marcus Ulpius), Emperor.
	**Temple of Trajan in his Forum. (Medals.) 22		<i>S. Simcon of Jerusalem, M.</i>
	**Column of Trajan. (Inscript. <i>in situ</i> .) 23	852	99-119
	Arch of Trajan (Dio, 68, 29) (Medal), [moved and rebuilt by Constantine.] 24		THIRD PERSECUTION OF THE CHRISTIANS.
	*Basilica Ulpia in the Forum of Trajan. (Inscript. and Medal.) 25		S. JOHN EVANG., M.
866	113	100	
	**Pantheum of Agrippa, Portico added (?). See also A.D. 202. 26		<i>S. Evaristus, of Bethlehem, Bishop of Rome.</i>
	Forum of Augustus—Lavaerum of Agrippina—and several Temples restored by Hadrian (Spartianus, Hadrian, 19). 27	103	
			<i>A Cemetery or Catacomb made for the Bishops of Rome (Anastasius, S. Calixtus).</i>
		858	106
			Dacia is made a Roman Province. Trajan marches to the East. Arabia Petraea conquered.
		107	
			<i>Frontinus, the Writer on Aqueducts, ob.</i>
		109	
			<i>S. Alexander I., a Roman, Bishop of Rome.</i>
			Plinius, Secundus, ob.
		866	113
			Armenia becomes a Roman Province.
			114 <i>Apollodorus the Architect flourished.</i>
			115 <i>Martyrdom of Ignatius.</i>
			116 <i>Suetonius, biographer, ob.</i>

PHOTOGRAPHS—

- 3 Nos. 78, 131, 357.
 4 Nos. 380, 1016 to 1023.
 7 Nos. 939 to 944.
 11 No. 303.
 13 Nos. 2228, 2229, 2230, 2236.

PHOTOGRAPHS—

- 14 No. 2070.
 18 665*, 1063, 1065, 2959*, 2960*.
 20 No. 833.
 21 No. 187.
 23 Nos. 810 to 815.

VI. TIME OF THE EMPIRE. PART II. HADRIAN AND THE ANTONINES TO CONSTANTINE, A.D. 120 TO A.D. 330.

Buildings in Rome.	
A.U.C.	A.D.
872	119
**Bridge of Ælius (Hadrianus), (Inscription (ap. Urlichs, Codex Urbis Romæ topograph., p. 60) and Medal). 1	
Banks of the Tiber and Cloacæ restored by Hadrian (Inscript. on cippi found on these banks). 2	
Temple of Venus. (Medal.) 3	
**Templum Urbis Romæ. (Coin of Hadrian.) See also A.D. 310. 4	
Temple of Hadrian. (Coin.) 5	
**Private House of Hadrian (Regionary Catalogue, Reg. XII.) 6	
881	128
**Mausoleum and Bridge of Hadrian, begun; finished A.U.C. 892 (Spartianus, c. 19), and Inscript. (Orell., 54, 59), (now the Fortress of S. Angelo). 7	
Ædes Bonæ Deæ Subsaxanæ (Spartianus, c. 19). 8	
*Septa, restored by Hadrian (Ibid.) 9	
Basilica Neptuni (Ibid.) 10	
Athenæum Hadriani (Cicero ad Atticum, iv. 16; Lampridius in Alex. Sev., c. 35.) 11	
Ludus Magnus (Aul. Gellius). 12	
Aqueduct XI., Hadriana (Inscription and Lampridius) afterwards called Alexandrina. 13	
889	136
**Column and pedestal of Antoninus Pius. (Inscript. <i>in situ</i> . Medal.) 14	
Porphyry Columns in private houses (as the house of Valerius Homulus), (Jul. Capitolin., Antoninus Pius, c. 11.) 15	
New streets and ways made.	
891	138
Temple of Æsculapius, in the Island, rebuilt. (Inscription.) 16	
**Temple of Antoninus and Faustina, finished A.U.C. 914. 17	
(Inscript. <i>in situ</i> and Coin). (Now the Church of S. Lorenzo in Miranda.)	
Altar of Faustina, Senior. (Coin of Antoninus Pius.) 18	
Tabernacle of Cybele. (Coin of Faustina, Senior.) 19	
895	142
Arches of Marcus Aurelius and Lucius Verus. 20	
**The Sessorium and Amphitheatrum Castrense (Region. Cat.) 21	

Contemporary Events.	
A.U.C.	A.D.
871	118
HADRIANUS (ÆLIUS TRAJANUS), EMPEROR.	
Last siege of Jerusalem, the new Colony there called Ælia.	
HADRIAN forbids the punishment of Christians without trial.	
<i>Juvenal</i> , poet, ob.	
<i>Pausanias</i> , author of the <i>Periegesis</i> .	
<i>Dionysius of Halicarnassus</i> , the Younger.	
<i>Herodian</i> , the grammarian.	
<i>Appian</i> , Greek historian, ob. 147.	
<i>Aristides</i> , the philosopher.	
<i>Adrian</i> , the Sophist.	
<i>Hermas</i> , the Pastor.	
119	
<i>S. Sixtus I.</i> , a Roman, Bp. of Rome.	
873	120
Hadrian commences a tour through the Provinces.	
The Colossus of Nero moved by Hadrian (Spartianus, c. 19).	
<i>The Roman Wall in Britain built.</i> (Inscription.)	
122	
<i>Catacomb of S. Alexander</i> , <i>Via Nomentana vii.</i> (Anastas. 7).	
126	
<i>Dionysius of Halicarnassus</i> .	
127	
<i>S. Telesphorus</i> , of Greece, Bp. of Rome.	
888	135
Ælius Verus (or Varius?) adopted as Cæsar, died three years afterwards.	
<i>Arrian</i> , Governor of Cappadocia.	
889	137
Great Fire in Rome, 340 houses in the city and insula burnt.	
891	138
Marcus Aurelius Antoninus, æt. 17, adopted as Cæsar Feb. 25.	
Hadrian dies, July 10.	
THE ANTONINES.	
891	138
TITUS AURELIUS ANTONINUS PIUS, EMPEROR.	
<i>Apology of Justin</i> , addressed to the Emperor with good effect.	
<i>Aulus Gellius</i> , gramm. and hist.	
892	138
<i>S. Hyginus</i> , of Athens, Bishop of Rome, divides the clergy into three orders (Anastas. 10).	
139	
Claud. Ptolomæus, Geographer.	
<i>S. Pius</i> , of Aquileia, Bishop of Rome.	
<i>The book of Hermas the Pastor</i> written (Anastas. 12).	
896	143
Herodes Atticus, consul.	
The Plague in Rome.	

PHOTOGRAPHS—

- 1 No. 1025.
5 Nos. 630, 631
7 No. 189.
13 Nos. 1427, 1436, 1540, 1541, 1542, 1640.
14 Nos. 327, 328.

PHOTOGRAPHS—

- 17 Nos. 298, 824, 839, 1220.
18 No. 498.
19 No. 487.
21 No. 191.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C.	A.D.	A.U.C.	A.D.
		150	<i>Marcion, the heretic.</i>
150	Painted Tomb on the Via Latina. 1	151	<i>Justin Martyr's first Apology.</i>
	[Brick - stamps, with names of Consuls.]	152	<i>S. Polycarp at Rome.</i>
		155-229	<i>Dio Cassius, historian.</i>
			<i>Hegesippus, historian.</i>
			<i>S. Anacletus, of Syria, M., Bp. of Rome.</i>
914	161 Villa of the Quintilii, Via Appia (Lampridius 4, and Inscript.) 2	160	<i>Pausanias, Gr. geograph.</i>
			<i>Hephæstion of Alexandria, gramm.</i>
			<i>Athenæus' Dialogues.</i>
917	164 **Church of S. Pudentiana made in the Thermæ or Baths of Novatus in the House of Pudens, by Pius I. (Pontif. Regist. ap. Anastas. 12). (Acta Martyrum, S. Praxedes.) This house was also the shelter of S. Justin Martyr. (Acta M. S. Justini.) 3	914	161 MARCUS AURELIUS ANTONINUS PIUS AND LUCIUS ÆLIUS VERUS, EMPERORS.
		163	Commodus born.
		166	Triumph of Marcus and L. Verus.
			FOURTH PERSECUTION OF THE CHRISTIANS.
			<i>SS. Justin and Polycarp MM.</i>
			<i>SS. Timothy and Mark MM. (Epist. Pii I. ad Justin.)</i>
			Temples built in several cities by Verus (Spartianus, 7.)
		167	Jamblichus.
		178	<i>Irenæus, Bishop of Lyons.</i>
		168	<i>S. Soter, of Fondi, Bishop of Rome.</i>
923	170 **Temple of Marcus Aurelius Antoninus (now the Custom-house). 4	169	FIFTH PERSECUTION OF THE CHRISTIANS.
	Temple of Peace burnt.		<i>The Christian Legion prays for rain and victory ;—is called Fulminea.</i>
	*Temple of Vesta rebuilt. 5		<i>SS. Philip and Leonidas, Martyrs.</i>
			Lucius Verus dies, æt. 38.
		172	Title of Britannicus assumed.
			<i>Apologies of Melito and Apollinarius.</i>
		173	<i>Herodian of Alexandria, gram.</i>
			Rise of the Sect of the Montanists.
		176	<i>S. Anicetus, M., buried in the Catacomb of Calixtus (Anastas. xi.)</i>
		177	<i>S. Eleutherius, of Nicopolis, Bishop of Rome, M.</i>
			<i>Irenæus at Rome.</i>
			<i>Persecution of Christians in Gaul.</i>
180	Tabernacle of Mercury. (Coin of Marcus Aurelius.) 6	933	180 COMMODUS (L. Ælius Aurelius Antoninus), Emperor.
	**Column of Marcus Aurelius Antoninus, built by Adrastus. (Inscript. ap. Marini, atti degli Arvali, p. 220.) 7		<i>Herodian, Greek historian.</i>
		181	<i>Theophilus, Christian writer.</i>
935	182 *Thermæ of Septimius Severus and Commodus, in Reg. I. begun ; completed in A.D. 199 (Spartianus in Severo, 19). 8	941	188 The Capitol struck by lightning. A fire at Rome. Vespasian's Forum of Peace destroyed.
	185 Aqueduct XII., Aurelia.		189 <i>Victor, Bishop of Rome.</i>
	190 Aqueduct XIII., Severiana. 9	943	190 <i>Clemens Alexandrinus, Eccles. hist.</i>
	191 Palace of Commodus on the Palatine (Lampridius 12). 10	944	191 Another great fire in Rome. The Temple of Peace and parts of the Palace destroyed.
		945	192 Commodus slain on Dec. 31, æt. 31. SEPTIMIUS SEVERUS (L. Antoninus), Emperor.
947	194 Temple of Bacchus and Hercules (Dio, lxxvi. 16 ; Spart., c. 23). 11	946	193 PERTINAX (P. Helvius), Emperor. Didius Julianus, Emperor. Pescennius Niger, Emperor.
		195	<i>Tertullian, Christian writer.</i>

PHOTOGRAPHS—

- 1** Nos. 2098 to 2104.
2 Nos. 2346, 2349, 2353, 2354.
3 Nos. 178, 1733, 1734.
4 Nos. 644, 645.

PHOTOGRAPHS—

- 7** No. 645.
8 Nos. 1485, 1486.
10 Nos. 108, 2300.

Buildings in Rome.

A.U.C. A.D.

- | | | | |
|-----|-------|---|----|
| 954 | 201 | *Arch of Septimius Severus, at the foot of the Clivus of the Capitol. (Inscript. <i>in situ</i> .) | 1 |
| 955 | 202 | **Arch of the Silversmiths in the Velabrum. (Inscript. <i>in situ</i> .) | 2 |
| | | Theatre of Septimius Severus. (Medal.) | 3 |
| | | Septizonium of Septimius Severus (Spartianus in Severo, 19). | 4 |
| | | **Portico of the Pantheon restored by Septimius Severus. (Inscript. <i>in situ</i> .) | 5 |
| | | **Portico of Octavia, restored by Septimius Severus. (Inscript.) | 6 |
| 962 | 209 } | **Thermæ of the Antonines and of Caracalla (Spartianus in Antonino Caracalla, c. 9). | 7 |
| | 220 } | | |
| 964 | 211 | *Temple of Vespasian, at the foot of the Capitol. (Inscript. <i>in situ</i> .) | 8 |
| 969 | 212 } | Marcian Aqueduct and Arcade restored. (Inscript. <i>in situ</i> .) | 9 |
| | 216 } | | |
| | 215 | *Aqueduct XIV., Antoniana. | 10 |
| | 218 | Church of S. Maria in Trastevere founded (<i>Titulus Julii</i>). (Anast.) | 11 |
| 973 | 220 | Temple of Heliogabalus, Sol, or Jupiter, on the Palatine (Lampridius in Anton. Heliogabalo, 3 and 17). | 12 |
| | | Restoration of the Amphitheatre or Colosseum after a fire (Lampridius, 17). | 13 |
| | | Senaculum on the Quirinal for women (Lampridius, 3). | 14 |
| | 225 | Aqueduct XV., Alexandrina, (Lampridius). | 15 |
| | | Church of S. Calixtus, now called S. Maria in Trastevere, founded. (Anastas. 17.) | |
| | | **Porticus to the Thermæ of Caracalla, begun by him and finished by Heliogabalus (Lampridius, 24). | 16 |
| | | Lavacrum of Heliogabalus (on the Palatine Hill, near the Arch of Titus), begun by him and finished by Alexander Severus (Lampridius, 32). | 17 |
| 983 | 230 | Temple of Mars (circular). (Coin of Gordianus.) | 18 |
| | | **Nymphæum and Baths of Alexander Severus. (Medal.) | 19 |
| | | Palace of Alexander Severus on the Palatine (Lampridius, 32). | 20 |
| | | **Aqua Alexandrina, and Thermæ near those of Nero (Lampridius, 25). | 21 |
| | | Opus Alexandrinum introduced (Lampridius, 25). | 22 |
| | | Basilica of Alexander between the Campus Martius and the Septa Agrippiana, 1,000ft. long and 100ft. wide (Lampridius, 26). | 23 |
| | | Aviaries built, on the Palatine (Ibid., 42). | |

Contemporary Events.

A.U.C. A.D.

- 949 196 BYZANTIUM, taken and destroyed.
197 *Dispute about Easter.*
202 SIXTH PERSECUTION OF CHRISTIANS.
Apology of Tertullian.
S. Zephyrinus, a Roman, Bp. of Rome.
Symmachus and Clemens Alexandrinus.
- 962 205 *Martyrs of Lyons and Vienne.*
962 209 Severus invades Caledonia.
210 The Roman Wall in northern Britain rebuilt.
Severus dies at York.
- 964 211 CARACALLA (M. AURELIUS ANTONINUS), Emperor.
212 *Apollonius writes against the Mon-
tanists.*
214 *Flavius Philostratus, biographer.*
- 970 217 Macrinus, Emperor.
Julia Domna, wife of Severus, and mother of Caracalla, dies.
- 971 218 ELAGABALUS, OR HELIOGABALUS, (Marcus Aurelius Varius), Emperor.
219 *S. Calixtus I., a Roman, Bp. of Rome.*
Cemetery of S. Zephyrinus, Via Appia (Anastas., 16).
Cemetery of Calepodius, and Calixtus made(?) (Anastas., 17).
- 975 222 ALEXANDER SEVERUS (Marcus Aurelius), Emperor, æt. 17.
Ulpian, the Jurist.
Herodian, Greek historian.
Julia Mammæa, mother of the Emperor, favours the Christians.
S. Urban I., a Roman, Bp. of Rome, M.
229 *Origen's Commentaries on Scripture.*
230 *Hippolytus, Christian writer; his effigy on a marble seat with the Paschal cycle engraved upon it, now in the Vatican Museum.*
S. Urban burnt in the Cemetery of Prætextatus (Anastas. 18).
S. Pontianus, a Roman, Bp. of Rome.
Many colossal statues erected (Lampri-
dus, 25).
Statues of Christ, Abraham, and Orpheus erected in the Lavacrum of Alexander Severus (Lampri-
dus, 29).
- 984 231 Persian War, triumph of Alexander Severus.
232 *Gregory of Neocæsarea.*
235 *S. Anterus, of Greece, Bp. of Rome, M.*
C. JULIUS VERUS MAXIMINUS, EM-
PEROR.
SIXTH PERSECUTION OF CHRISTIANS.
236 *S. Fabian, a Roman, Bp. of Rome, M.*
Schism of Novatus begun.

PHOTOGRAPHS—

- 1 Nos. 772, 1209.
2 Nos. 196, 772, 1092.
6 Nos. 741, 1079.
7 Nos. 193, 194, 195, 1184—1189.
Nos. 929, 1670.

PHOTOGRAPHS—

- 10 Nos. 73, 539, 883, 884, 1202, 1772.
13 Nos. 184, 185.
15 Nos. 80, 99, 2126.
19 No. 61.

		<i>Buildings in Rome.</i>	
A.U.C. A.D.			
990	237	**Palace and Villa of the Gordiani (Jul. Capitolin.—supposed to be at the Torre dei Scavi, or Schiavi?) on the Via Gabina and Prænestina.	1
		Porticus, Basilica, Thermæ, and Viridaria in the Campus Martius (Jul. Capitolin. 33).	2
		Statues of Gallienus placed (Jul. Capit., 18, c. 1).	3
240		Tomb of the Gordiani.	4
244		Temple of Jupiter (circular). (Coin of Philip and Octavia.)	5
		Theatre, Circus, Amphitheatre, and Stadium, restoration completed (Lampridius in Alex. Severus, 24).	
996	249	Thermæ of Decius ϵ .	6
	251	Cemetery or Catacomb of S. Paul on the Via Ostiensis and of S. Peter in the Vatican (?) made (Anastas. 22).	7
	254	Temple of Juno Martialis (circular). (Coin of Gallus.)	8
1016	257	**Arch of Gallienus. (Inscription.)	9
	267	Temple of Saturn.	10
THE FOURTH WALL OF ROME.			
1024	271	**WALL OF AURELIAN BEGUN; completed in 276 (?), with corridor in the Wall for the sentinel's path. (Zosimus, lib. i. cap. 49; Vopiscus in Aurel. cap. 21 et 39).	11
		*Templum et Agon Solis (in Reg. VII., Via Lata).	12
		Thermæ Hyemales in Transtiberina Regione (Vopiscus, 45).	13
		*Porticus Milliarensis, built by Aurelian in the Circus and Gardens of Sallust (Vopiscus in Aurel. 49).	14
			15
	271	Church of S. Felix, Via Aurelia (Anastas. 27).	16
	275	Marble Plan of Rome made. (Inscription).	17

ϵ The Great Thermæ of the third century, of the time of Decius and of Tacitus, were on the eastern side of Rome, and there are considerable remains of them. The building called a temple of Minerva Medica was a Hall or Nymphæum belonging to them.

PHOTOGRAPHS—

1 Nos. 920 to 923.

		<i>Contemporary Events.</i>	
A.U.C. A.D.			
991	238	GORDIANUS III., Emperor.	
		M. Clodius Pupienus Maximus, Emperor.	
		D. Clodius Albinus, Emperor.	
		<i>Herodian's history ends.</i>	
		<i>Plotinus, Gr. philosopher at Rome.</i>	
997	244	Philippus, Emperor.	
	247	Secular Games celebrated.	
1000	248	S. Cyprian, bishop of Carthage.	
1002	249	Decius (C. Messius Quintus Trajanus), Emperor.	
		Gallus (C. Vibius Trebonianus), Emperor.	
		SEVENTH PERSECUTION OF THE CHRISTIANS.	
		<i>Fabian, Bishop of Rome, M.</i>	
	250	Seven missionaries sent into Gaul.	
	251	S. Cornelius, a Roman, Bp. of Rome.	
	252	Novatian, a Roman, antipope.	
		S. Lucius, of Lucca, Bp. of Rome.	
1005	252	C. Vibius Volusianus, and Æmilianus, Emperors.	
1007	253	VALERIANUS (P. Licinius), Emperor.	
		GALLIENUS (P. Licinius), Emperor.	
		S. Stephen I., a Roman, Bp. of Rome.	
	256	Irruptions of the Goths and the Franks.	
1010	257	S. Xistus, or Sistus II., of Athens, Bishop of Rome, M.	
		Aurelian repels the Goths.	
	258	S. Cyprian is martyred.	
	259	S. Dionysius, of Grece, Bp. of Rome, M.	
		Second Irruption of the Goths.	
	259	EIGHTH PERSECUTION OF THE CHRISTIANS.	
1014	261	Gallienus, Macrianus, Valens, Odenathus, Emperors.	
	262	Earthquake and Pestilence at Rome.	
	264	Council of Antioch.	
1021	268	M. Aurelius Claudius (Gothicus), Emperor.	
		The Goths conquered by Claudius.	
	269	S. Felix I., a Roman, Bp. of Rome, M.	
1023	270	AURELIANUS (L. Domitius), Emp.	
	272	NINTH PERSECUTION OF THE CHRISTIANS.	
	273	A Forum made at Ostia, near the sea (Vopiscus, 44).	
		<i>Longinus, Greek Philosopher, is put to death by Aurelian.</i>	
1027	274	Triumph of Aurelian; among the captives are Goths, Franks, Vandals, and Germans.	
		Palmyra ruined.	
		The Pomœrium enlarged to the Wall of Aurelian.	
	275	S. Eutychianus, of Tuscany, Bishop of Rome, M.	

PHOTOGRAPHS—

4 Nos. 898, 923, 925.

9 No. 198.

10 No. 897.

11 Nos. 4, 9, 10, 35, 36, 37, 64, 363, 414, 946 to 949, 1206, 1207, 1208, 1215, 1300.

15 Nos. 824*, 1022, 1023.

17 Nos. 782, 783, 816, 817, 841.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C.	A.D.	A.U.C.	A.D.
1028	275	1028	275
	Thermæ of Tacitus ^e .		TACITUS (M. Claudius), Emperor.
	1	1029	276
			Florianus, Emperor.
			Probus (M. Aurelius), Emperor.
1036	283	280	S. Cyril, Bishop of Antioch.
	*Basilica Julia in the Forum, which had been burnt, restored by Diocletian and Maximian, (Catalogus Vet. Imperatorum).	1036	283
	2		Carus (M. Aurelius), Carinus, and Numerianus, Emperors.
	Porticus Jovii Augusti, i.e. Diocletiani (Inscription in Gruter, p. exi. No. 6).		S. Caius, of Salona, Bp. of Rome.
	3		Paul, the Theban, the first hermit.
	*Aqua Jovis, from the Aqua Marcia to the Thermæ of Diocletian.		Targum and Talmud composed.
	4	1037	284
	*Aqueduct XV. Aqua Algensiana.		DIOCLETIANUS (C. Valerius), Maximianus, and Maxentius, Emperors.
	5		290
			Firmianus Lactantius, Christian writer.
			292
			Carausius is slain after holding Britain seven years.
			293
			Julius Capitolinus, historian.
			Ælius Lampridius, historian.
			Flavius Vopiscus, historian.
			Ælius Spartianus, historian.
1057	304	296	S. Marcellinus, a Roman, Bp. of Rome.
	*Circus of Maxentius and Romulus, "in Catacumbis." (Inscript., Orell., 1069.)		297
	6		Arnobius, Christian writer.
	Hippodrome of Maxentius.		300
			Methodius, Christian writer and M.
1058	305	1055	302
	**Thermæ of Diocletian completed by Galerius and Constantius. (Inscript., Gruter, 29, 1.)		Triumph of Diocletian and Maximian.
	7		303
	(The Churches of S. M. degli Angeli, and S. Bernardo, are made in Halls of these Thermæ.)		TENTH PERSECUTION OF THE CHRISTIANS. CHURCHES DEMOLISHED.
	8		305
			Diocletian abdicates.
1063	310	1059	306
	*Arch of Constantine,—finished in 326. (Inscript. in situ.)		CONSTANTIUS AND MAXIMIANUS, Emperors.
	9		Eusebins of Casarea, historian.
	*Thermæ of Constantine, on the Quirinal.		Trebellius Pollio, biographer.
	10		308
	*Templum Urbis, the rebuilding begun by Maxentius, finished by Constantine, in Reg. IV.		Maxentius and Romulus, Emperors.
	11		S. Marcellus, a Roman, Bp. of Rome.
	**Temple of Concord rebuilt. (Inscription.) (Gruter, c. 6); see A.U.C. 747, 764.		The Cross of Christ found (Anastas. 32.)
	12		310
			S. Eusebius of Greece, Bp. of Rome.
1065	312		311
	**Basilica (Market Hall) of Constantine begun by Maxentius, finished by Constantine.		S. Melchiades of Africa, Bp. of Rome.
	13	1065	313
	Sessorium or Palace of S. Helena (western wall built).		Deaths of Diocletian and Maximian.
	14		PEACE OF THE CHURCH.
	**Thermæ of S. Helena, near the Porta Maggiore. (Inscript. in Museo Vaticano.)		Churches restored and dedicated.
	15		Chapters largely endowed by Constantine.
	**Mausoleum of S. Helena, on the Via Labicana.		The splendour of the Church leads to its corruption. (Eusebius.)
	16		314
	**Mausoleum of S. Constantia, on the Via Nomentana.		Silvester, a Roman, Bishop of Rome.
	17		
	314		
	Titulus Equitii juxta Thermas Domitiani, now the Church of SS. Silvester and Martino, founded by Pope Silvester (Anastas. 34).		18

^e See note g, p. 20.^f "S. Laurentius Via Tiburtina in Agrum Veranum supra Arenarium Cryptæ." (Anast. 43.)

"Marcellinus et Peter exerusta at Mausoleum Helenæ Augustæ." (Anast. 44.)

PHOTOGRAPHS—

6 Nos. 261, 901 to 904.

PHOTOGRAPHS—

7 Nos. 300, 301, 590.

9 Nos. 808, 809, 918.

13 Nos. 204, 205.

14 No. 1376.

16 Nos. 207, 208, 330.

17 No. 210.

18 No. 232.

<i>Buildings in Rome.</i>		<i>Contemporary Events.</i>	
A.U.C.	A.D.	A.U.C.	A.D.
320	Churches said by Anastasius (36) to have been built in Rome in the time of Constantine (?).	320	Churches said by Anastasius to have been founded by Constantine in the Provinces (39). Antioch, S. Peter. Ostia, SS. Peter, Paul, and John Baptist (46). Capua, the Apostles (47). Naples, a Church, an Aqueduct, and a Forum (48).
	Basilica Constantina (36), now S. John Lateran, — in part of the Palace of Plautius Lateranus.	321	Arius condemned.
	S. Peter in the Temple of Apollo in the Vatican (38).	324	<i>Hermias Sozomen, historian.</i> <i>Eustathius, Christian writer.</i>
	S. Paul Via Ostiensis (40).	325	First General Council of the Christian Church at Nicæa, or Nice, in Bithynia.
	S. Croce in Gerusalemme, in the Sessorian Palace (41).	326	S. Athanasius, Bp. of Alexandria.
	S. Agnes, with the Mausoleum and Baptistery of S. Constantia.	335	A Synod at Jerusalem, called by Constantine.
	S. Constantia (42).	336	Marcus, a Roman, Bishop of Rome.
1079	326 Temple of Saturn on the slope (<i>clivus</i>) of the Capitol rebuilt. (Inscript.)	337	Julius I., a Roman, Bishop of Rome. Death of Constantine.
1105	352 **Statue of Constantine. (Inscription.)		

PHOTOGRAPHS—

5 Nos. 398, 1589, 1591, 1592.
6 No. 1600.

PHOTOGRAPHS—

7 Nos. 1601 to 1606.

BUILDINGS IN ROME REPRESENTED ON
ROMAN COINS.

THE following list contains most of the buildings presumed to have been in Rome between the time of Augustus and Constantine the Great.

The first column gives the name or character of the building; the second, the legend on the Coin on which it appears; the third, the name of the Emperor who struck the Coin, and the date when reasonably ascertained.

AV stands for Aurum—gold
AR ,, Argentum—silver.
Æ ,, Æs—brass.

The legends of the Coins are for the most part arranged alphabetically, as is usual in Numismatic works, according to the first letter of the inscription. Occasional exceptions, which may be noticed, are, generally, due to the fact, that, in Numismatic books, gold coins are, as a rule, classed separately, before the silver or copper.

<i>Name and Nature of Building.</i>	<i>Legend on the Coin.</i>	<i>On whose Coin.</i>
Frieze of Temple	IMP. CAESAR.	AUGUSTUS, A.U.C. 718—711, B.C. 35—28. AV. AR.
Hexastyle Temple	A POLLIN.	„ AR.
Triumphal Arch	CIVIB. ET. SIGN. MILIT. A PART. RECVP.	„ B.C. 19. AV.
Tetrastyle Temple	COS. ITER. ET. TER. DESIG. DIVO. JVL.	„ B.C. 32. AV.
On Triumphal Arch	IMP. CAESAR.	„ B.C. 35—28. AR.
On Columna Rostralis	IMP. CAESAR.	ditto.
Temple of Janus shut	JAN. CLV.	„ B.C. 25. AR.
Hexastyle Temple	JOVI. OLYM.	„ AR.
Hexastyle Temple	JOVIS. TONANT.	„ B.C. 22. AV. AR.
Hexastyle Temple	MAR. VLT.	„ B.C. 20. AV. AR.
Tetrastyle Temple	MART. VLT.	„ „ AR.
Hexastyle Temple	PACI. PERP.	„ B.C. 23. AR.
Triumphal Arch on bridge	QVOD. VIAE. MVN. SVNT.	„ B.C. 16. AV. AR.
Tetrastyle Temple	S. P. Q. R.	„ B.C. 20. AV. AR.
Hexastyle Temple, with statue of Augustus	S. P. Q. R.	„ Struck after his death. Æ.
Tetrastyle Temple	JOVI. DEO. S. C.	„ Æ.
Round Hexastyle Temple	DIVVS. AVGVSTVS. PATER.	„ Struck after death. Æ.
Triumphal Arch	L. VINICIVS. on front S. P. Q. R. IMP. CAES.	„ B.C. 16 or 15. AR.
Triumphal Arch	CIVIB. ET. SIGN. MILIT. A. PART. RECVP.	„ See above, B.C. 19. Æ.
Octostyle Temple, with statue of Augustus Nicephorus	TI. CÆSAR. DIVI. AVG. F. AVGVST. P. TR. POT. XXXVI.	TIBERIUS, A.U.C. 787, A.D. 34. Æ.
Triumphal Arch, with equestrian statue of Drusus (probably struck by Claudius)	DE. GERMANIS.	NERO DRUSUS. AV. AR.
Hexastyle Temple	DIVO. AVG.	CALIGULA, A.D. 37. Æ.
Triumphal Arch	DE. BRITANNI.	CLAUDIUS, A.D. 41. AV. AR.
Triumphal Arch	DE. GERM.	„ A.D. 46 AV. AR.
On the Gate of the Prætorian Camp	IMPER. RECEPT.	„ A.D. 41. AV. AR.
Triumphal Arch	NERO. CLAVDIVS. DRVSVS.	„ A.D. 41. Æ.

<i>Name and Nature of Building.</i>	<i>Legend on Coin.</i>	<i>On whose Coin.</i>
Temple of Janus	PACE . P. R. TERRA . MARIQ . PARTA . JANVM . CLVSIT.	NERO, A.U.C. 819, A.D. 66. AV. Æ.
Hexastyle Temple	VESTA.	,, AV.
Port of Ostia	AVGVSTI . PORT. OST.	,, Æ.
The Public <i>Macellum</i> , or Market	MAC. AVG. S. C.	,, Æ.
Triumphal Arch, with Nero on top in quadriga	S. C.	,, Æ.
Triumphal Arch, on which	QVADRAGENSUMA REMISSA. S. C.; also XXXX REMISSA . S. C.	GALBA. Æ.
Distyle Temple	I. O. MAX. CAPITOLINVS.	VITELLIUS. AR.
Round Tetrastyle Temple	VESTA.	VESPASIANUS, A.U.C. 824, A.D. 71; also A.U.C. 825, 826, A.D. 72, 73. AV.
Tetrastyle round Temple	S. C.	,, A.U.C. 824, A.D. 71. Æ.
Hexastyle Temple (of Jupiter Capitolinus)	S. C.	,, A.U.C. 824, A.D. 71, Æ.
Round Temple	VESTA.	TITUS. AV.
Amphitheatre and <i>Meta</i>	DIVO. AVG. T. DIVI . VESP. F. VESPASIAN.	,, A.U.C. 833, A.D. 80. Æ.
Same type, but legend	IMP. T. CAES. VESP. AVG. P. M. TR. P. P. COS. VIII. S. C.	,, Æ.
Hexastyle Temple	S. C.	,, A.U.C. 825 or 6, A.D. 72 or 73. Æ.
Hexastyle Temple, of Jupiter Capitolinus	S. C.	,, A.U.C. 830-1, A.D. 77-8. Æ.
Tetrastyle Temple	CAPIT . RESTIT.	DOMITIAN, A.U.C. 835, A.D. 82. AR.
Tetrastyle Temple	IMP. CAES.	,, AR.
Round Tetrastyle Temple	IMP. CAES.	,, AR.
Hexastyle Temple	IMP. CAESAR.	,, AR.
Octostyle Temple	IMP. CAESAR.	,, AR.
Round Tetrastyle Temple	VESTA.	,, AV.
Octostyle Temple	No legend.	,, A.U.C. 845, A.D. 92. AR.
Distyle Temple	No legend.	,, A.U.C. 848, A.D. 95. AV.
Triumphal Arch of two arches, sup- ported by four columns	S. C.	,, A.U.C. 838, A.D. 85. Æ.
Round Distyle Temple	S. C.	,, A.U.C. 848, A.D. 95. Æ.
Hexastyle Temple	S. C.	,, A.U.C. 825, A.D. 72. Æ.
Round Tetrastyle Temple	VESTA . S. C.	,, ,, Æ.
Arch of Triumph on two arches, supported by four columns	Without legend.	,, A.U.C. 843-4, A.D. 90-1. Æ.
Distyle Temple (struck for Asia?)	ROM. ET . AVG. COM. ASI.	NERVA, A.U.C. 850, A.D. 97. AR.
Ulpian Basilica	BASILICA . VLPPIA.	TRAJAN, A.U.C. 867, A.D. 114. AV. Æ.
Octostyle Temple (of Peace?)	COS. V. P. P. S. P. Q. R. OPTIMO. PRINC.	,, A.U.C. 857-863, A.D. 104-110. AV.
Trajan's Column	COS. VI. P. P. S. P. Q. R.	,, A.U.C. 866, A.D. 113. AR.
Forum of Trajan	FORVM . TRAIAN.	,, A.U.C. 867, A.D. 114. AV. Æ.
Trajan's Column	S. P. Q. R. OPTIMO . PRINCIPI.	,, A.U.C. 866, A.D. 113. AR.
Bridge or Arch of Aqueduct and two columns	S. P. Q. R. OPTIMO PRINCIPI. AQVA TRAIANA.	,, A.U.C. 857-863, A.D. 104-110. Æ.
Walls of the Port of Trajan at the mouth of the Tiber.	PORTVM TRAJANI . S. C.	TRAJANUS, A.U.C. 857-863, A.D. 104-110. Æ.

<i>Name and Nature of Building.</i>	<i>Legend on Coin.</i>	<i>On whose Coin.</i>
Circus Maximus	S. P. Q. R. OPTIMO. PRINCIPI. S. C.	TRAJANUS, A.U.C. 857—863, A.D. 104—110. Æ.
Façade of Temple of Jupiter	Same.	„ „ Æ.
Temple (Octostyle)	Same.	„ „ Æ.
Triumphal Arch, with three smaller arches	TR. POT. COS. III. P. P. S. C.	„ A.U.C. 853, A.D. 100, Æ.
Octostyle Temple	ROM. S. P. AVG.	HADRIANUS. AV.
Tetrastyle Temple, in which Samian Juno, or Proserpina	COS. III. SARD.	„ AV.
Distyle Temple, with Ephesian Diana	DIANA. EPHESIA. COS. III.	„ AV.
Column surmounted by a helmet	COS. III.	„ AV.
Distyle Temple, in which Hercules	P. M. TR. P. COS. III.	„ AV.
Tetrastyle Temple, in which Hercules	Same.	„ AV.
Tristyle Temple, before which Hadrian	COS. III. S. C.	„ Æ.
Tetrastyle Temple, before which Hadrian	Same.	„ Æ.
Decastyle Temple	S. P. Q. R.	„ Æ.
Octostyle Temple	AED. DIVI. AVG. REST. COS. III.	ANTONINUS PIUS. AR.
Round Distyle Temple	COS. IIII.	„ AR.
Octostyle Temple, with statues of Augustus and Livia, and in front, quadriga.	TEMPL. DIVI. AVG. REST. COS. IIII.	„ A.U.C. 912, A.D. 159, AV. AR. Æ.
Circular Temple, with a gallery and five columns, within, statue of Bacchus	No legend.	„ A.U.C. 898, A.D. 145, Æ.
Tetrastyle Temple, with circular cupola, and statue of Antoninus	COS. IIII. S. C.	„ A.U.C. 907, A.D. 154. (Various modifications of this medal, and dates A.U.C. 911, 912, 913.) Æ.
Same temple, but only two columns visible	COS. IIII. S. C.	„ A.U.C. 908, A.D. 155. Æ.
Column of Antoninus	DIVO. PIO. S. C.	„ Æ.
Hexastyle Temple of Rome	ROMAE AETERNAE. S. C.	„ A.U.C. 892, A.D. 139; another A.U.C. 896, A.D. 140—143. Æ.
Decastyle Temple of Venus	VENERI. FELICI. S. C.	„ A.U.C. 893-6, A.D. 140-3.
Decastyle Temple, with seated statue of Faustina	AED. DIV. FAVSTINAE.	FAUSTINA I. AR.
Hexastyle Temple	ÆTERNITAS.	AR.
	ÆTERNITAS. S. C.	Æ.
Hexastyle Temple	DEDICATIO AEDIS.	AR.
Building, in two stages; on upper stage, Antoninus seated, before him a table and a child; on lower, five women and a man standing	PVELLAE FAVSTINIANAE.	„ AV.
Round Tetrastyle Temple of Vesta	No legend.	„ AV.
Mausoleum, or Pyramid, in four tiers; on second stage, six columns and a gateway	CONSECRATIO. S. C.	„ Æ.
Hexastyle Temple, on which five statues	PIETAS. AVG. S. C.	„ Æ.
A Bacchante on a lion; behind, a temple, of which three columns are visible	TR. POT. VII. COS. II.	MARCUS AURELIUS, A.U.C. 906, A.D. 153. Æ.
Three men and three Vestals sacri- ficing before circular Tetrastyle Temple	S. C.	FAUSTINA II. Æ.
Sacrifice before Hexastyle Temple of Jupiter	VOTA. PVBLICA. IMP. II. COS. II. P. P.	COMMODUS.
Janus seated in a Distyle Temple	P. M. TR. P. XI. IMP. VII. COS. V. P. P. S. C.	„ A.U.C. 940, A.D. 187. Æ.

<i>Name and Nature of Building.</i>	<i>Legend on Coin.</i>	<i>On whose Coin.</i>
Triumphal Arch, with three arcades supported by four columns	COS. P. P.	SEPTIMIUS SEVERUS, A.U.C. 957, A.D. 204. AR.
Bridge, at each end of which a building with four columns	P. M. TR. P. XVI. COS. III. P. P.	,, A.U.C. 961, A.D. 208. AV. Æ.
Circus, with one arcade outside, and two within	P. P. COS. III.	,, A.U.C. 955, A.D. 202. AV.
Hexastyle Temple, with six statues	ROMAE . AETERNAE.	,, A.U.C. 954, A.D. 201. AR.
Serapis in a temple	JOVI . SOSPITATORI . AVG. S. C.	,, ,, Æ.
Arch of Sept. Severus, three arches and four columns	ARCVS . AVGG. S. C.	,, A.U.C. 957, A.D. 204. Æ.
Hercules standing before a Distyle Temple	P. M. TR. P. XV. COS. P. P. S. C.	,, A.U.C. 960, A.D. 207. Æ.
Severus sacrificing before Hexastyle Temple	VOTA . SVSCEP . DECEN. S. C.	,, A.U.C. 954, A.D. 201. Æ.
Round Tetrastyle Temple of Vesta	VESTA MATER.	JULIA DEMNA. AV. AR.
Round Tetrastyle Temple of Vesta	VESTA MATER . S. C. and VESTA . S. C. alone.	,, Æ.
Round Tetrastyle Temple of Vesta	P. M. TR. P. XVII. COS. III. P. P.	CARACALLA, A.U.C. 967, A.D. 214. AV.
Round Tetrastyle Temple of Æsculapius	P. M. TR. P. XVIII. COS. III. P. P.	,, A.U.C. 968, A.D. 215. AV.
Distyle Temple of Æsculapius	PONTIFEX . TR. P. X. COS. II.	,, A.U.C. 960, A.D. 207. AV.
Triumphal Arch in three tiers, with figures of Caracalla or Severus in a chariot	ARCVS . AVGG. S. C.	,, A.U.C. 957, A.D. 204. Æ.
Octostyle Temple of Jupiter	JOVIS . CUSTOS . S. C.	,, Æ.
Hexastyle Temple of Rome	ROMAE ETERNAE.	GETA. AR.
Hexastyle Temple of Jupiter	JOVI VLTORI.	ALEXANDER SEVERUS. AR.
Amphitheatre	P. M. TR. P. II. COS. P. P.	,, A.U.C. 997, A.D. 224. AR.
Thermæ of Alex. Severus	P. M. TR. P. V. COS. II. P. P.	,, A.U.C. 979, A.D. 226. AR.
Distyle Temple of Rome	P. M. TR. P. VII. COS. P. P.	,, A.U.C. 981, A.D. 228. Æ.
Thermæ of Alex. Severus	PONTIF . MAX. TR. P. V. COS. II. P. P.	,, A.U.C. 979, A.D. 226. Æ.
Hexastyle Temple of Jupiter	JOVI . VLTORI . P. M. TR. P. III. COS. P. P. S. C.	,, ,, Æ.
Column on which vot. x.	P. M. TR. P. VIII. COS. III. P. P. S. C.	,, A.U.C. 983, A.D. 230. Æ.
Amphitheatre and <i>Meta Sudans</i>	PONTIF . MAX. TR. P. II. COS. P. P. S. C.	,, A.U.C. 976, A.D. 223. Æ.
Amphitheatre and <i>Meta Sudans</i>	MVNIFICENTIA . GORDIANI . AVG.	GORDIANUS III. Æ.
Circus and Obelisk	P. M. TR. P. VII. COS. II. P. P.	,, A.U.C. 997, A.D. 244. Æ.
Tetrastyle round temple of Victory	VICTORIA . AVG.	,, A.U.C. 995, A.D. 242. Æ.
Hexastyle Temple of Jupiter (?)	SAECVLVM NOVVM.	PHILIPPUS I., A.U.C. 1001, A.D. 248. AR. Æ.
Octostyle Temple of Jupiter (?)	SAECVLVM NOVVM . S. C.	,, ,, Æ.
Tetrastyle Temple of Apollo	EX ORACVLO APOLLINIS.	PHILIPPUS I., PHILIPPUS II., and OTACILIA, A.U.C. 999, A.D. 244. Æ.
Round Temple with eight porticoes and a statue in each	P. M. TR. P. M. COS. P. P.	,, A.U.C. 999, A.D. 246. Æ.
Hexastyle Temple of Rome (?)	SAECVLVM NOVVM.	OTACILIA, A.U.C. 1001, A.D. 248. AV.
Cippus	MILLIARIVM . SAECVLVM . S. C.	,, ,, Æ.

<i>Name and Nature of Building.</i>	<i>Legend on Coin.</i>	<i>On whose Coin.</i>
Hexastyle Temple of Rome	SAECLVLM NOVVM.	PHILIPPUS II., A.U.C. 1001, A.D. 248. AR.
Ocotstyle Temple	SAECLVLM NOVVM.	" " Æ.
Hexastyle Temple	SAECLVLM NOVVM.	ETRUSCILLA. AR.
Tetrastyle Temple of Vesta	VESTA.	" Æ.
Hexastyle Temple of Spes	SPES . PVBLICA.	HERENNIVS ETRVSCVS. AR.
Distyle Temple of Juno	JVNONI MARTIALI	HOSTILIANVS. AR.
Hexastyle Temple of Rome (?)	SAECLVLM NOVVM.	" AR.
Round Tetrastyle Temple of Juno	JVNONI MARTIALI.	TREBONIANVS GALLVS. AR. Æ.
Hexastyle Temple of Rome (?)	SAECLVLM NOVVM.	" AR.
Hexastyle Temple of Fortuna	FORTVNAE REDVCI.	" Æ.
Round Distyle Temple of Juno	JVNOVI MARTIALI.	" Æ.
Hexastyle Temple of Fortuna	FORTVNAE REDVCI.	TREBONIANVS GALLVS, AND VOLVSIANVS. Æ.
Round Tetrastyle Temple of Juno	JVNONI MARTIALI.	VOLVSIANVS. AV.
Distyle Temple of Juno	JVNONI MARTIALI.	" A.U.C. 1004, A.D. 251. AR. Æ.
Hexastyle Temple of Rome	SAECLVLM NOVVM.	" AR.
Tetrastyle Temple of Mars	DEO MARTI.	GALLIENVS. Æ.
Tetrastyle Temple to Vulean	DEO VOLCANO.	" Æ.
Tetrastyle Temple to the Segetia	DEAE SEGETIAE.	SALONINA. AV.
Tetrastyle Temple to Vulean	DEO VOLKANO.	VALERIANVS II. Æ.
Distyle Temple of Fortuna	FORTVNA REDVX.	POSTVMS. Æ.
Tetrastyle Temple to Hereules Deusonienſis	HERC. DEVSONIENſI.	" Æ.
Triumphal Arch, with ſix columns	FILICITA (<i>ſic</i>) AVG.	" Æ.
Hexastyle Temple of Rome	ROMAE AETERNAE.	CLAVDIVS GOTHICVS. AV.
Hexastyle Temple of Apollo	APOLLINI CONſERVATORI.	QVINTILLVS. Æ.
Hexastyle Temple of Rome	ROMAE AETERNAE.	PROBVS. Æ.
Hexastyle Temple of the Sun	CONſERVAT . AVG.	" Æ.
Hexastyle Temple of Rome	ROMAE AETERNAE.	" Æ.
Gate of the Prætorian Camp	PROVIDENTIA . AVGG.	DIOCLETIANVS. AR.
Gate of the Prætorian Camp, with four turrets, [ſeveral varieties exiſt of this building]	VICTORIA . AVGG.	" AR.
Hexastyle Temple of Jupiter	JOVI . CONſERVATORI . AVG.	" Æ.
Hexastyle Temple of Rome	CONſERV. VRB. SVAE.	MAXIMIANVS. AR. Æ.
Hexastyle Temple of Jupiter	JOVI . CONſERVATORI . AVG.	" Æ.
Hexastyle Temple, erected by Maxen- tius to Maximian	ÆTERNA MEMORIA.	" A.U.C. 1063—1065, A.D. 310—312. Æ.
Temple, with round eupola and closed gates (tomb ?)	MEM. DIVI. CONSTANTI.	CONSTANTIVS. Æ.
Tetrastyle Temple	MEMORIA . FELIX.	" Æ.
Hexastyle Temple, with eupola	ÆTERNA MEMORIA.	GALERIVS MAXIMIANVS. Æ.
Hexastyle Temple of Rome	CONſERVATOR . VRBIS . SVAE.	MAXENTIVS. AR. Æ.
Tetrastyle Temple of Rome	CONſERV. VRB. SVAE.	" Æ.
Hexastyle or Tetrastyle Temple with eupola	AETERNAE MEMORIAE.	ROMVLVS. AV. AR.
Hexastyle temple of Rome	ROMAE AETERNAE.	ALEXANDER. Æ.
Column	VOTA . ORBIS ET VRBIS SEN. ET . P. R.	LICINIVS I. AR.
Column	PRINCIPIS PROVIDENTISSIMI	" AV.
Hexastyle Temple of Rome	CONſERVATORES . VRB. SVAE.	CONSTANTINE THE GREAT, A.U.C. 1060, A.D. 307. Æ.

W. S. W. VAUX.

THE PRIMITIVE FORTIFICATIONS.

P R E F A C E.

THE numerous excavations carried on in Rome during the last few years have thrown a new light on many obscure subjects, and not least, on the ancient earthworks, on which, and within which, the City of Rome was made. They have also shewn that the walls which formed part of these Fortifications were built of great blocks of tufa. Several things, which at first seemed bold and hazardous conjectures only, have eventually become matter of strict demonstration. It is now certain that these great blocks of stone were each of a ton weight (or each a load for a cart, as Dionysius says), and have in many cases been left in their original places, used as foundations for later buildings. Even when these later buildings have subsequently been rebuilt *from the foundations*, those foundations themselves have been left as they were, as there could not be better foundations to build upon.

These ancient walls now brought to light, could not have been visible in the Augustan age, nor could have been seen by Varro, or Cicero, or Livy, or Dionysius: it is therefore impossible that any of those authors could have written their works to fit these walls, which they could not have seen; hence when we find that the architectural character and the construction of these walls agree with their writings in the succession attributed to them, this fact goes far to demonstrate the substantial truth of the ancient history of Rome, legendary or traditional, as it may be,—but which has been handed down from father to son orally for many generations before it was committed to writing as history. That this history was fully believed by the writers of the Augustan age, is evident from the writings themselves, and from many inscriptions. The fragment of the beginning of a set of Fasti, of the time of Augustus, engraved on a marble tablet, dug up in the Forum in 1872, begins with “Romulus, the son of Mars.” Of course, the mixture of the supernatural, and the mention of the gods, are only marks of the credulity of the people, and all historians have to separate the marvellous and the supernatural from the reality of history. In the celebrated inscription called *Monumentum Ancyrinum*, in which Augustus records the buildings he had erected, he says that he *made the Lupercal*, that is, he built a hall or chamber against the mouth of a cave,

which he believed to have been a wolf's cave, under the north-west corner of the Palatine Hill. Such a cave still remains, with a fine stream of water gushing out into it, and with ruins of vaulted chambers of the time of Augustus in front of it.

Again, on the top of the Palatine, nearly over this cave, we have a wall of the earliest character of any wall in Rome, a continuation of which can be traced by portions of it still remaining and now made visible, on three sides of an oblong space at the north end of the hill. The earliest part is immediately opposite to the Hill of Saturn, occupied by the Sabines before the arrival of the Romans. There is also a wide and deep trench or foss across the hill on the southern side of this oblong space, and on both sides of the trench or valley there are remains of very early tufa walls; on the north side also, the part nearest to the enemies' quarter, are the lower parts of towers begun and left unfinished, and then used as foundations for later buildings.

On the Hill of Saturn are considerable remains of the great public building originally called the Capitolium, erected when it was agreed to make that hill the Capitol of the new city, consisting then of the two hills only. There are also considerable remains of the wall that enclosed these two hills, which is mentioned incidentally only by Dionysius; but this sort of incidental notice is more valuable even than a direct statement of the fact would be: he takes it for granted, as a thing that every body knows, that the temple of Castor and Pollux was built at the north-east corner of the Palatine Hill, "when the two hills were enclosed in one wall." The walls of that period, which we find to have been fifty or sixty feet high, and twelve feet thick, are not easily obliterated; but they are often misunderstood, and they have been so in this instance. Of this wall of the second City of Rome, the junction with the eastern cliff of the Hill of Saturn was brought to light in 1872, under a house in the Via di Marforio. This wall was one of enclosure for municipal purposes, the boundary of the new City, but not much intended as a fortification. An account of it is given in an Appendix to our third chapter on the "Historical Construction of Walls."

The other hills were fortified when they were first inhabited each as a separate fortress; but they were not included in the boundary of the City until the time of Servius Tullius. Each of these separate fortresses can be traced by existing remains of tufa walls of that early period. On the Aventine, where the Latins were settled after the conquest of their principal city of Alba Longa, these remains are very important and interesting, as we can there see more

clearly than anywhere else the plan of these old fortifications (in the garden or vineyard of Prince Torlonia, near S. Prisca). We there see that the cliff has been scarped to the depth of fifty or sixty feet, and a terrace made on a ledge in the rock at the foot of this escarpment; and on this ledge we see further that the wall stands: that this wall is built in part of the great blocks of tufa, cut away from the surface of the cliff in the process of scarping it, and that other parts of similar blocks of a slightly different colour have been brought from a quarry in the same hill, very near to the spot; stones of a ton weight each are not easily brought from a distance. We notice that the wall, in its original state, was twelve feet thick, formed entirely of these large blocks, and that, in another part, it has been altered to introduce small arches, perhaps for catapults; that in this part the back of the wall is a mass of concrete faced only with the great blocks of tufa, and that the arches have been made in this outer facing, but these are evidently introduced at a subsequent period, though still an early one. We observe also that at the foot of this great wall was a trench, afterwards filled up, and deep pits made in it in the time of Trajan, connected with the *thermæ* of his cousin Sura.

This fortress is at the north-west angle of a gorge in the hill, at the narrow end of which was a gate, where four roads meet. On the opposite, or south angle of this gorge, are remains of another ancient fort, of which we have only the concrete mass of the wall; but at the foot of it we found, by excavations made in 1871, remains of the facing of large blocks of tufa, as on the other side. This second fort is under S. Sabba, on the Pseudo-Aventine, and that part of the hill appears to have been the arx or citadel of the Aventine when it was a separate fortress. The tufa wall remains at the other end of it under S. Balbina, still visible on the eastern side, as it was also on the northern side (when a photograph was obtained of it in 1868), before Signor Rosa had buried it in the earth that he brought from the Palatine and threw there. The church and monastery of S. Balbina is on the site of another ancient fort, of which the tufa walls could be seen on three sides of it, on the east and the north, as mentioned, and on the west also, where it has been excavated; on the south side, the trench has been filled up.

This ancient fort (now S. Balbina) is opposite to another on the Coelian, in which the Villa Mattei or Coelimontana has been built. These two ancient forts were used by Servius Tullius to protect the Porta Capena in his short *agger* across the valley, from the cliff

of the Aventine to that of the Cœlian. The fort at the north-east corner of the Cœlian protected two other gates at the inner ends of other gorges, one in the southern cliff, now the entrance to the Piazza della Navicella from the Porta Metronia ; the other in the western cliff, going up nearly to the arch of Dolabella. That arch was the entrance into that part of the hill which was afterwards called the Claudium, made in another ancient fort on the south-western angle of the Cœlian, extending nearly to the site of the Colosseum. The scarped cliffs are very distinct on three sides. The Clivus Scauri passes between these two ancient forts on the western side of the hill. Between the Claudium and the other part of the Cœlian is another gorge, and the narrow end of this nearly meets that before-mentioned, near the arch of Dolabella. It would appear that the western end of the Cœlian, almost detached from the hill, was the arx or citadel of that hill as a separate fortress. On the north side of the hill, the church and monastery of the Santi Quattro Coronati stands, evidently in another ancient fort, with the cliff visible on three sides of it, and a trench on the south, cutting it off from the rest of the hill. This protected another gate, where the church of S. Clement now stands. Between the east end of the Cœlian and the Lateran fortress is another wide and deep foss, partly natural and partly cut, with walls against the cliffs on both sides, and tombs on both sides also, shewing that it was outside of the City. The Lateran has been probably made in the Cœliolum. The church of S. Clement, which stands upon another of these short *aggeres*, connected the Cœlian fortress and the Esquiline fortified hill ; the southern and eastern cliffs of that hill carry on the line to the junction with the great *agger* on the eastern side of Rome.

There are remains of the ancient fortifications of the Viminal on the cliff opposite to S. Vitale, and of the Quirinal in the Colonna Gardens, and in part of the gardens of Sallust (now those of Spithoever). The arx of the Esquiline was probably where the church of S. Pietro in Vincoli now stands, where the cliffs and the trenches are very visible ; that of the Viminal was probably where the ruins of towers were excavated in 1871, as mentioned ; that of the Quirinal was probably where the great palace is now situated.

All these separate fortresses were, of course, merged in the city of Servius Tullius. This third City of Rome was made by uniting the seven hills in one enclosure, making use of the previous ancient fortifications of separate villages, uniting them by *aggeres*, or banks of earth, faced with walls having deep and wide trenches in front of them, across the valley from the scarped cliffs of one

hill to those of another, and by making the great *agger* of Servius Tullius on the high table-land on the eastern side of Rome. Of this there are considerable remains, long seen and acknowledged as such by all who have paid attention to the subject.

This third City was seven miles round ; but nearly all fortifications require an outer wall of enclosure, called the “wall of *enceinte*,” and the Tarquins endeavoured to supply this by another great bank and foss of far greater extent, making the circuit thirteen miles. The labour required for these great earthworks must have been enormous, and could only have been made by the whole population of the city being employed upon them for years. This could only have been done under a despotic government ; but the people had not the same foresight as their rulers, and they at last rebelled against all this labour, of which they did not see the necessity. The rebellion under Brutus was successful, and the Republic was established, as we know. The great *mœnia*, or the outer line of defence, were left unfinished at both ends ; nor was there any outer wall to the Aventine until the time of Claudius, and in the break between the Prætorian Camp and the Pincian Hill the outer earthworks were never erected. This was the weak part of the defences of Rome, and at this point it was repeatedly attacked and taken. Indeed, from that time there was an end to all great public works, until the time of Sylla the dictator.

To understand properly the ancient fortifications of Rome, where they are so much concealed by later work, it is necessary to look at those of other cities of the same early period, such as Fiesole, Volterra, and other Etruscan cities to the north ; Tusculum, Alba Longa, and Gabii, on the eastern side. These have, we find, fortifications of precisely the same character, and far more perfect, though varying in details, according to their respective situations. Alba Longa is especially important, as being the reputed city from which the first Romans emigrated ; and Gabii, as having been another colony from Alba Longa. This town is built on precisely the same plan,—a single long street on the edge of a lake.

CONTENTS OF BOOK I.

THE PRIMITIVE FORTIFICATIONS.

CHAPTER I. THE ANCIENT EARTHWORKS.

Section I.—INTRODUCTION.

	PAGE		PAGE
The usual character of fortifications of the period of the foundation of Rome, illustrated by the History of the Jews and the ancient fortifications in Palestine and other countries, consisting chiefly of earthworks, scarped cliffs, wide and deep trenches and fosses, with walls built against the cliffs to support them. The inhabitants of the earth at that period, chiefly herdsmen and shepherds, living in wooden huts collected within walls for mutual protection	1	Gabii, another Colony from Alba Longa, similarity of its Fortifications	7
Hill Fortresses or Fastnesses	2	The Palatine Fortress with its wings, called the Velia and the Velabrum	8
The Roads made in the Trenches	ib.	The Palatine and the Hill of Saturn united in one City	ib.
Wood much used in these Walls	3	The other hills added to these	9
Terraces on the slopes, and zigzag Roads to ascend the Hills	5	The Aggers of Servius Tullius and of the Tarquins to enclose the City	10
In Italy, such Fortresses visible everywhere	ib.	The Legendary History must be true in substance	12
Alba Longa, the Fortifications of	6	The Foss-ways of the Romans	13
		The Primitive Fortifications of Rome compared with others of the same Period	14
		Usual characteristics of the Period	15
		The Janiculum originally a detached Fort	16
		Original Roads in the Trenches	17
		The Construction of Walls of the time of Julius Cæsar were still of plain and early character	18

II. THE POMÆRIUM OF THE KINGS.

The Trenches always planted with fruit-trees	19	The Etruscan rite used for marking out the Pomœrium, according to Varro, Aulus Gellius, Livy, and Dionysius	20
In Rome, these Trenches called the Pomœrium, or Fruit-garden	ib.		

III. THE PALATINE.

Originally protected on three sides by swamps	23	This Fort defended the sloping roads up to the Hill, afterwards the Via Sacra, the Clivus Sacer, and the Summa Via Sacra	24
On the fourth side by the Velia, a Promontory cut off from the Esquiline Hill by a wide and deep Trench	ib.	The Arx, Citadel, or Capital of Romulus at the north end of the	

	PAGE		PAGE
Palatine Hill, protected by Walls of Tufa, and called ROMA QUADRATA	24	Reservoir of rain water, with peculiar wells, resembling the same feature at Alba Longa	34
Remains of the Walls and Towers	ib.	Wall of the time of the Republic .	35
A zigzag road at the north-west end from the Arch of Janus, and the Forum Boarium, to the terrace and the gate	25	Ancient Towers under the Church of S. Anastasia	36
Traces of the ancient earthworks and the paved roads in the trenches	27	Remains of the Infima nova via .	ib.
The Walls of Romulus described by Dionysius and Plutarch . .	28	Fortification of the Arx of Romulus	37
The Boundaries described by Tacitus	29	The Tarpeian Rock or Hill of Saturn, then occupied by the Sabines	38
The Altar of Consus in the Lupercal	30	The Aqua Argentina, the only drinking water in the Palatine .	ib.
Other traces of Ancient Earthworks	31	Roma Quadrata	39
The original Forum Romanum, made in the Foss	33	The Marsh or Lake of Mettius Curtius	40
Early Wall (of Romulus?) against the Cliff	34	Portæ Mugionis and Romana .	41
		Porta Janualis on the site of the Arch of Janus	42
		APPENDIX—The Ara Maxima .	43
		The Pomœrium of Romulus . .	44

IV. THE CAPITOLINE HILL.

Capitolium Vetus on the Quirinal	45	The Boundary Foss round the foot of the Capitol	47
Tarpeian Rock or Hill of Saturn .	ib.	Enlargement of the Pomœrium .	48

V. THE AVENTINE [added A.U.C. 30 (?), B.C. 723 (?)].

Boundaries of the Aventine,—The Pseudo-Aventine,—Tufa Walls of the Kings,—The Lauretum .	49	placed there after the demolition of their city by Ancus Martius .	50
The Aventine had no outer wall, therefore no Pomœrium . . .	50	It was first inhabited by the Latins, B.C. 630	ib.
The inhabitants of Alba Longa		Remains of Agger and Foss . .	51

VI. THE CÆLIAN, OR CÆLIAN, ADDED TO THE CITY,
A.U.C. 147, B.C. 650.

Boundaries of the Cœlian,—Scarped Cliffs and Foss	53	Clefts or Gorges, with Gates eastward of this	53
The Arx at the west end, afterwards the Claudium to the north, and a Cohors Vigilium to the south	ib.	A great Foss between the Cœlian and the Lateran	54
		The Cœliolus, afterwards called the Lateran (?)	55

VII. THE QUIRINAL, VIMINAL, AND ESQUILINE, ADDED TO THE CITY,
A.U.C. 153, B.C. 600, AND COMPLETION OF THE ENCEINTE
BY SERVIUS TULLIUS.

Quirinal, Viminal, and Esquiline, called Colles, not Montes . .	56	The Quirinal called Agonalis .	57
Protected on the East by the great Agger of Servius Tullius . .	57	Earthworks and Scarped Cliffs still visible	58
		The great Agger of Servius Tullius	59

	PAGE		PAGE
Fortifications of Rome compared with the Walls of Ecbatane . . .	60	In the time of the Republic, houses built upon the inner Aggers, and against the Scarped Cliffs . . .	63
Descriptions of the great <i>agger</i> by Pliny, Livy, and Strabo . . .	61	The Pulchrum Littus . . .	64
The outer Wall or <i>Mœnia</i> of the Tarquins on the eastern side of Rome, the bank on which the Aqueducts and the Wall of Aure- lian were afterwards placed . . .	62	The Tarquins and Brutus . . .	ib.
		The Janiculum not then part of the City, but a separate Fortress . . .	65
		— afterwards added to the City . . .	66

VIII. THE GATES OF SERVIUS TULLIUS.

In the <i>enceinte</i> of the original City were fifteen Gates . . .	67	Porta, 7. Navalis, — Arco de S. Lazzaro (?) . . .	80
I. Porta, Flumentana . . .	68	— 8. Catularia . . .	ib.
II. — Carmentalis . . .	ib.	— 9. Mæcia or Metia . . .	81
III. — Rutumena . . .	69	— 10. Lavernalis . . .	ib.
IV. — Fontinalis . . .	70	— 11. Minucia . . .	82
V. — Sanqualis or Sangualis . . .	71	— 12. Fenestella . . .	ib.
VI. — Salutaris or Piacularis . . .	ib.	— 13. Libitinensis . . .	83
VII. — Collina . . .	72	— 14. Ferentina . . .	ib.
VIII. — Viminalis . . .	73	— 15. Near the Columnæ Vip- sanæ . . .	ib.
IX. — Esquilina . . .	ib.	— 16. Agonensis . . .	ib.
X. — Querquetulana or Querquetularia . . .	75	APPENDIX.—Note A. Porta Flu- mentana . . .	84
XI. — Coelimontana . . .	ib.	Note B. Porta Carmentalis . . .	ib.
XII. — Capena . . .	76	— C. Fortifications, a double line of defence . . .	85
XIII. — Raudusculana . . .	77	— D. The Port of Rome, The Marmorata . . .	86
XIV. — Nævia . . .	ib.	The Ripa Grande,— Corbels carved into Lions' Heads . . .	ib.
XV. — Trigemina . . .	78		
Gates within the <i>enceinte</i> :—I. Mu- gionis, 2. Romana, 3. Southern Gate of the Palatine, 4. Saturnia, 5. Stercoraria, 6. Triumphalis . . .	79		

BOOK I.

PRIMITIVE FORTIFICATIONS.

CHAP. I. THE ANCIENT EARTHWORKS.

SECT. I. INTRODUCTION.

THE history and the remains of the Primitive Fortifications of ancient Rome must be judged of by the same rules as other fortifications of the same kind and of about the same period. The kings of Rome were contemporary with the kings of Israel and Judah, and the wars of the Jews described in the historical books of the Old Testament throw more light on the fortifications of this period than we have anywhere else. They agree also with the existing remains not in Judea only, but in Italy and other countries also. Such fortifications always consist mainly of earthworks. Stone walls were used to keep up the earth, and prevent it from slipping down by the action of the weather. A stone wall was built against a scarped cliff on the edge of a hill, as on each of the seven hills of Rome, or against the face of a great bank of earth forming an artificial hill, such as the *Agger* and Wall of Servius Tullius. Such walls were used as enclosures only, for the defence of the dwellings of the inhabitants, and such cities are often called in Scripture, "Cities of Refuge," because the shepherds and the herdsmen of the neighbourhood could take refuge in them with their flocks and herds, for which space was always provided; but there were no buildings of a permanent character within these walls and earthworks during the early period. The earliest buildings in any city are the temples, and these are generally at least a century later than the walls, as at Gabii, Fiesole, and many other ancient cities.

To fortify our dwellings against enemies or intruders is an instinct of human nature, and from the earliest period of the history of man we find traces of fortifications. The early inhabitants of the earth lived either in caves, or in huts formed of wicker-work, or wattle-work and wood, with thatched roofs. Such habitations continued to be the usual dwellings of the human race for many centuries, and similar structures are still in use in many parts of the world, and even in some parts of England and Wales, under the name of the huts of the shepherd or the charcoal-burner; but with us they are

generally used for temporary purposes only. In Italy, the peasantry still reside habitually in such dwellings, which, at a little distance, have the appearance of haystacks or ricks of corn, and it is not until we are close to them that we see that they are provided with an aperture serving the double purpose of a door and window, that they are hollow, and that each is the habitation of a family. Such habitations are evidently open to every sort of attack, and for this reason they were soon collected together in villages, which afterwards grew into towns^a.

These villages or towns were surrounded by a bank of earth and a wide deep trench, out of which the earth for the bank had been taken. There are often two trenches, one on each side of the bank, and when the town was large the inner trench served as a road for the soldiers to man the walls, and for the sentinel's path. On the top of the bank a wall of wood, with wooden towers, was placed, or sometimes a palisade only. These early fortifications were generally placed on the tops of the hills for greater security. The edge of the hill was then cut into vertical cliffs, and the earth or stone that was cut off to make a perpendicular surface naturally formed a bank or terrace at the foot of the cliff, and below that a second cliff was necessary, with a wall built up against it. This wall was originally of wood only, afterwards of stone.

In process of time the summits of nearly all the hills became fortified in this manner, and a whole district of country was fortified by a chain of these fortified hills, and the narrow gorges between them, which were easily defended also. This became what is called a chain of fortresses, to defend the borders of a country; and when war was expected, the first thing to do was to prepare these fortresses for defence, and supply them with provisions. We read of such fortresses frequently in the history of the Jews, the earliest authentic history that we possess. Thus when the Hebrews were expecting to be attacked by Holofernes, the general of Nabuchodonosor, king of Assyria, the first step was to prepare the fortresses, as we read in the fourth chapter of the Book of Judith :—

“Now the children of Israel that dwelt in Judea heard all that Holofernes, the chief captain of Nabuchodonosor, king of the Assyrians, had done to the nations. . . . Therefore they sent into all the coasts of Samaria and the villages . . . and possessed themselves beforehand of all the tops of the high mountains, and fortified the villages that were in them, and laid up victuals for the provision of war . . .

^a Whole villages formed of huts of this primitive description still remain within sight of S. Peter's in many directions. There is a very remarkable village of

this kind at Gabii, within the old walls, which forcibly brings to mind the days of the foundation of Rome.

and wrote to those that dwelt in the villages that are toward the open country . . . charging them to keep the passages of the hill country ; for by them there was an entrance into Judea, and it was easy to stop them that would come up, because the passage was straight, for two men at the most . . . Then was it declared to Holofernes, the chief captain of the army of Assur, that the children of Israel had prepared for war, and had shut up the passages of the hill country, and had fortified all the tops of the high hills, and had laid impediments in the champaign countries : wherewith he was very angry ^b.”

We read elsewhere :—

“ And we took all his cities at that time . . . *threescore cities*, all the region of Argob, the kingdom of Og in Bashan. All these cities were fenced with high walls, gates, and bars ; beside unvalled towns a great many ^c.”

It appears evident that we should now call these cities and towns villages only, as the extent of the country of Bashan does not admit of such a number of *towns* in the modern sense of the word. The *fenced cities* were fortified villages, and the *unvalled towns*, hamlets. That the walls and gates were of wood only, upon earthworks, is also more probable than that they were of stone, unless in a district where stone is more abundant than wood, as is *sometimes* the case, but comparatively seldom. The trenches and earth-works made to attack a city, or to subdue it by blockade and starvation, were of the same material and construction as those used for the defence : therefore a description of the one applies equally to the other, and the instructions given for the attack would apply equally to the defence. That wood was abundantly used in connection with the earthworks, both for the attack and for the defence, is evident from the notices we have from the earliest period, and at all periods, even including their castles, keeps, or citadels, as appears from other passages in the Book of Numbers.

“ And they burnt all *their cities* in which they dwelt, and all their *goodly castles* with fire ^d.”

These wooden walls and wooden towers are mentioned also in other parts of the Old Testament history. We must bear in mind that stone walls will not burn. We do not hear of these cities being afterwards rebuilt, but of new cities being made of earth-work and wood ; such earth-works remain everywhere, but the wooden walls and wooden towers have perished for centuries.

“ I will kindle a fire *in the wall* of Damascus, and it shall consume the palaces of Benhadad ^e.”

^b Judith iv. 1—7 ; and v. 1, 2.

^c Deut. iii. 4, 5.

^d Numb. xxxi. 10.

^e Jeremiah xlix.

“We will build sheepfolds here for our cattle, and cities for our little ones : but we ourselves will go ready armed before the children of Israel, until we have brought them unto their place : and our little ones shall dwell in the fenced cities because of the inhabitants of the land ^f.”

“And the children of Gad, and the children of Reuben, built [many] fenced cities : and folds for sheep, and gave other names unto the cities which they builded ^g.”

“Give unto the Levites cities to dwell in, . . . and suburbs for the cities round about them. And the cities they shall have to dwell in ; and the suburbs of them shall be for their cattle, and for their goods, and for all their beasts. And the suburbs of the cities, which ye shall give unto the Levites, shall reach from the wall of the city and outward a thousand cubits round about. And ye shall measure from without the city two thousand cubits (or about 1,600 yards) on each side, and the city shall be in the midst, . . . and among the cities which ye shall give unto the Levites shall be six cities for refuge ; . . . and to them ye shall add forty and two cities ^h.”

“For they came up with their cattle and their tents, and they came as grasshoppers for multitude ; for both they and their camels were without number : and they entered into the land to destroy it ⁱ.”

We must bear in mind that at the period of these wars, and of the foundation of Rome, the inhabitants of Italy, like the children of Israel, were chiefly herdsmen, whose wealth consisted of their flocks and herds, as it had done in the days of the patriarchs. These were driven before them wherever they went, and there was no great hardship in being sent from one pasture to another. Attached to each fortress was an enclosure for the flocks and herds, surrounded by a bank and a trench, which became afterwards either a hedge and ditch, or a wall and a foss, according to circumstances. These were the places of security to which their property could be driven for protection, and no fortress was complete without this accessory ; such hill-fortresses were called fastnesses, and we read of them continually in Cæsar's Commentaries of his wars in Gaul and Britain. These ancient earth-works were on a gigantic scale, the whole population was employed upon them for mutual defence, and they were never destroyed. They may often have towns or castles built in them at later periods, which to some extent efface their ancient character ; but such banks, such trenches as were made in primitive times were never destroyed, and hardly can be destroyed ; the bank may be removed in parts, and the trench filled up in parts, but it is sure to leave plain traces behind. The tops of many of the hills

^f Numb. xxxii. 16.

^g Ibid., ver. 34, 35, 38.

^h Numb. xxxv. 2—6. This was one of the cities given to the Levites at the time that the Jews were first settled in Palestine. A cubit is nearly 1 ft. 6 in.

The boundaries of these small cities of the Jews were therefore nearly 6,000 ft. square, or more than a mile on each side.

ⁱ Book of Judges, c. vi. v. 5.

in England and in Gaul were fortified in this manner. Sometimes these great earth-works are considered as natural formations, in other instances they are called Cæsar's camps, because they were afterwards occupied by the Romans ; but they were often constructed by the natives to oppose the Roman invasion, as Julius Cæsar plainly tells us. Such ancient fortresses are found all over the world, in the East as well as in the West ; in Palestine they are very remarkable, and Jerusalem itself is built on a strong earth-work.

These defences were often the successive terraces on the slopes of the hill, made also into a zigzag road up the hill, the road being carried in the trenches, and turning round at the ends, so that an enemy on marching up to the attack of the gate at the top must always expose his weak side unprotected by the shield, in some part of the approach^k. The remains of these terraces and zigzag roads are very evident on the Palatine Hill on three sides, the north, west, and south ; the eastern side, being protected by the Velia, required a different arrangement.

We must not conclude that, because the great fortification was faced with a stone wall, the inhabitants of Rome, in the time of the kings, lived in stone houses. On the contrary, it is recorded that even the house of Romulus was a wooden hut only. This was carefully preserved until the time of the Empire, and had been seen by one of the writers who mentions it^l. The only stone buildings within the walls were a few temples ; the houses were entirely of wood, and most of the temples also. At that early period stone temples were quite the exception, even in the most civilized countries. When a great deal of ornament was used in their buildings, the ornament was of wood or of bronze, *not of stone*.

In Italy, the fortified villages on the tops of the hills are visible everywhere, sometimes still inhabited, sometimes deserted ; and before the foundation of Rome, all the important high hills for many

^k Maiden Castle, in Dorsetshire, has been a city of this description ; there are nine of these mounds and trenches to defend the approach to the principal gate.

^l Dionysius of Halic., lib. i., says that the *Casa Romuli*, a wooden hut, was until his time on the Palatine Hill. Vitruvius *de Archit.*, lib. ii. c. i., mentions the *Casa Romuli*, as made in the Capitol :—“Item in *Capitolio* commonefacere potest et significare mores vetustatis *Romuli Casa in arce sacrorum stramentis tecta.*” And Seneca in *Consolat. ad Helviam Matrem* :—“Ne tu pusilli animi es, et sordido te consolaris, si

ideo fortiter pateris quia *Romuli casam* nosti. Dic illud potius : Istud *humile tugurium* nempe virtutes accipit.” And in the I *Controv.*, lib. ii.—“Colit etiam num in *Capitolio casam* victor omnium gentium populus,” &c. The Capitol here mentioned is the *arx* or citadel at the north end of the Palatine Hill, not the Capitoline Hill. The whole of this chapter of Vitruvius agrees, perfectly, with what is here stated in the text. The same remark applies equally to Seneca, who in another passage uses the expression of *Capitolium arcemve*. De Constantia Sapientes, c. vi.

miles round had been fortified. The Janiculum, the most commanding spot in the immediate neighbourhood, the Quirinal and the Capitol were all occupied, and therefore fortified. In all probability the Sabines had the Capitol for their Arx or Citadel, and their town on part of the Quirinal, separated from it by a deep trench or foss, probably partly natural; the tongue of land which connected the Capitol with the Quirinal can be traced^m. This trench was greatly enlarged by Trajan to make his forum, and the cliff of the Quirinal was cut away to the depth of a hundred feet, the exact height of his column, as is recorded on an inscription on the base.

Livy gives several graphic descriptions of the attack and defence of fortified places. For example:—

“The army was led up to the walls with fascines made of bushes collected in the country, with which, the ditches being filled, the scaling ladders were raised, and the town taken at the first attackⁿ.”

Alba Longa.—According to the traditional history of Rome, the original settlers on the Palatine were a colony from Alba Longa, and there are to be noticed in the existing remains several circumstances that remarkably confirm this tradition, which we know was believed in the time of the early Empire. The few walls that remain against the cliffs at Alba Longa are of the same character as those called the Walls of Romulus on the Palatine, and in each case there is a remarkable reservoir for rain-water, with peculiarities that have not been observed elsewhere in Italy. In both instances, the reservoir is situated under an angle of the Arx or Citadel, and in each there are wells cut through the rock that forms a vault over the reservoirs, and these wells in both instances are hollow cones, with the wide mouth downwards. The sides of such wells are usually vertical only. The one on the Palatine is at the south-west corner^o, behind the most perfect part of the Wall of Romulus. The one at Alba Longa is miscalled a prison by the ignorant guides; but it is evidently an ancient reservoir made in a cave that is partly natural, and there is an aqueduct leading from it of very early character, an open channel cut in the rock by the side of the road in a ledge of the cliff of the lake.

Gabii is also stated by Livy to have been a colony from Alba Longa, and here also the existing remains bear out the truth of that tradition in a very remarkable manner. Like the original city, Gabii was built on the edge of a lake, and was one long narrow

^m A part of the *agger* and Wall of Servius Tullius has been found upon this tongue of land, which forms a ridge.

ⁿ Livii Hist., lib. vi. c. x.

^o This was restored in 1871 by Signor Rosa.

strip only for the greater part, with the arx or citadel at one end, where now stands a medieval tower made into a farm-house. This was the point open to attack, and therefore strongly defended. At the further end the ground descends and spreads out; here was the burial-ground or necropolis, which continued in use in the time of the Empire, and in the seventh century a church was made in it out of a fine tomb of the first century. A temple had been built in that part at a much earlier period, but still not so early as the city walls by some centuries.

In the remains of other fortified cities of the early period, such as Fiesole and other Etruscan cities, as Volterra^p, or in the cities of the Latins, such as Gabii, we do not find any remains of houses; there are commonly one or two temples, not of such early character as the walls, and sometimes a fortified palace or arx; but the houses were mere huts^q. It was, therefore, no great hardship for people in such a state of civilization to be removed with their flocks and herds from one city to another, wherever safe fortifications for their families and pasture for their cattle were provided; they were contented to go or remain. This accounts for the rapid rise in the population of Rome. The Romans for several centuries adopted the plan of transferring the inhabitants of the conquered cities to Rome; their flocks or herds were added to those of the Romans, and increased the wealth of the city.

It is most probable that a considerable part of the original fortifications of Rome were of earth-works and wood only, according to the custom of that age, and that stone walls were added afterwards, when required, as the wood decayed. Dionysius of Halicarnassus states that Tarquinius Priscus was the first to build the walls *of the city* of stone, of which the construction had previously been extemporary

^p The reader who requires more information on this subject, may refer to Geo. Dennis (*Cities and Cemeteries of Etruria*, 2 vols. 8vo., London, 1848); A. Noël des Vergers (*l'Etrurie et les Etrusques, ou dix ans de fouilles dans les Maremmes toscanes*, 2 vols. 8vo., with an Atlas, folio, Paris, 1862-64); Otfried Müller (*Die Etrusker*, vier Bucher, 2 vols. 8vo., Breslau, 1828); Micali (*Storia degli antichi popoli Italiani*, of which there are many editions, the latest of which is in 3 vols. 8vo., and Atlas, folio, Firenze, 1833; Canina (*l'Antica Etruria maritima*, &c., 2 vols., folio, Roma, 1846-51).

For the construction of the walls and the plans of these cities I rely more on

my own personal observation than on other persons'; but Micali gives engravings of similar walls at Volterra, Fiesole, Populonia, Roselle, Terni, and Todi; those of Signi and Cossa are of polygonal masonry, because the nature of the stone is different. The works of these authors are valuable for the history, but they have not generally paid attention to the points in question.

^q The modern village of huts only, which may now be seen within the walls of Gabii, which is mentioned in p. 2, and shewn in one of my photographs, is probably of exactly the same character as that of their predecessors three thousand years since.

and mean, and that he built them of stones each a ton in weight^r. But the words of the classical authors generally require to be taken very *precisely*; and this passage is probably intended to apply to the walls of the CITY only, not to those of the ARX on the Palatine Hill, which had previously been built in the main by Romulus. There was no occasion to fortify the north end of the Palatine after the Capitol was made part of the same city.

The Palatine fortress included also the Velia (with the Sub-Velia or Intermontium) and the Velabrum, the two wings of the ancient fortress, to defend the approaches to it. The Velia is that small triangular hill^s or ancient earth-work, out of the north end of which the great Basilica of Constantine has been cut. The earth at the back is level with the tops of the arches; it was originally in all probability a promontory from the Esquiline cut off by the great foss of Romulus, now the Via del Colosseo. The Sub-Velia was the lower ground between this and the main part of the Palatine Hill, this was also called the *Intermontium* and the Summa Via Sacra. The Clivus Sacer began in front of the church of SS. Cosmas and Damian, and ascended to the level platform on which stands the Arch of Titus and the monastery of S. Francesca Romana. The Velabrum was the marshy ground at the foot of the Palatine, westward, extending as far as the *Janus Quadrifrons*, now called the Arch of Janus; originally there was an inlet from the Tiber to this point.

When the union with the Sabines took place, the Capitol, the Quirinal, Viminal, and Esquiline were added to the city, and these, with the three previously occupied, made the seven hills. The Janiculum was a separate fortress connected with the city by a covered way, that is, a road in a foss or trench, with a bank by the side to protect it. The seven hills^t were combined into one fortified city by the later kings, the two Tarquins and Servius Tullius. The plan adopted was to make use of the existing hill fortresses, and connect them together by a short *agger*, or bank and foss, across each of the valleys; this connecting wall was brought high up in the

^r Dionysius Hal., l. iii. c. 68.

^s This hill is marked on Canina's map as the Carinæ, from a fancied resemblance to the keel of a ship.

The Sub-Velia probably included the church of SS. Cosmas and Damian (originally the temple of Venus and of Rome), because this temple is described as upon the Palatine Hill.

"... dominæ pergunt ad limina Romæ. . . .

Conveniunt ad tecta deæ, quæ candida lucent,

Monte Palatino." (Claudianus, De Laudibus Stilich., lib. ii. v. 224.)

The Germalus was the slope and terrace towards the Velabrum.

^t The seven hills were not always the same, at a later period the three *colles* were reckoned as one hill or *mons*. The Janiculum and the Vatican hills were *then* reckoned as parts of THE CITY.

valley, in order that the outer part of the early hill fortresses might serve to protect the approach to the gate. The one from the Esquiline to the Cœlian passes under the north end of the Church of S. Clement, where it has been excavated by Father Mullooly, and remains visible. The one from the Cœlian to the Aventine is not far from the Palatine and the Circus Maximus. It was excavated in 1868 and 1869, and again in 1871, under my direction, and the remains of the Porta Capena found in it. The sill of that gate, which remains *in situ*, at first discovered in 1868, is only three yards wide; this is in accordance with the laws of the Twelve Tables. In the excavation of 1871, it was discovered that the Porta Capena had *two* arches. We find one of the gates of Pompeii of the same size, the Porta della Marina. It will be remembered that in some of the hill-fortresses of the Jews there was room for only two persons to pass at the gates^u.

Another short *agger* must have gone across the valley between the two parts of the Aventine, from the site now occupied by S. Sabba to that of S. Prisca; from thence the cliffs of the Aventine, and then the Tiber, were the boundary of the city on the west as far as the Capitol. Against the bank of the river a tufa wall was built by the kings, called the *Pulchrum Littus*, part of which remains visible, with the mouths of the Marrana and of the Cloaca Maxima left in it. The arches over each of these openings are of later date than the sides. That over the Marrana is mediæval, with a mill built over it; that of the Cloaca Maxima is said to have been erected in the time of Camillus, after the capture of Veii, of cut stone (*lapis gabinus*), inserted in the older wall of tufa.

Another of these short *aggers* went from the Tiber to the west end of the Capitol, with three gates in it, and one more from the east end of the Capitol to the Quirinal; then the cliffs of the Quirinal complete the circuit of the city. The ground at the foot of the Capitol is so entirely built over and altered by modern streets, that these two short *aggeres* cannot now be traced^v. The great foss on

^u This small size of the gates is mentioned as a peculiarity of the *hill forts* to defend the passes. Other gates we know were larger.

^v There are remains of a massive wall of tufa under the church of S. Angelo in Pescheria, which is not an improbable line for that *agger* and wall. On the eastern side of the Capitol, the ridge in the line of the Via di Marforio is caused by that *agger*; a part of the wall of tufa was recently exposed to

view in rebuilding the house, No. 82, in that street. It went in a direct line across the south end of the Forum of Trajan towards the Quirinal, under the Torre delle Milizie. The Via di Marforio originally turned at a sharp angle outside of the *agger* to the gate. The *Lautumiæ* of the Mamertine Prison are now cellars under the houses in the southern part of that street, and partly under the street itself, which is modern in that part.

the north side and at the two ends of the Capitol can be traced. The part between the Capitol and the Quirinal was widened by Trajan to make his forum in it; but on the eastern side of the City the three hills (called *colles*) are only promontories from high table-land, and on this side the great *agger* of Servius Tullius was made for more than a mile, connecting the cliff at the north end of the Quirinal to that on the east side of the Esquiline. This completed the fortifications of the city proper, but it was usual in all fortifications to have a wall of enclosure called an *enceinte*, forming a double line of defence; and Tarquinius Superbus, the last of the kings, began another great *agger*, parallel to that of Servius Tullius, but some distance to the east of it. On part of this bank the aqueducts were carried, and afterwards made into part of the Wall of Aurelian. This external fortification was of much greater extent than was necessary for the population of Rome at that period, and the enormous labour required for it caused the great rebellion, under Brutus, which ended in the establishment of the Republic. The *agger* of Servius Tullius has long been considered as an established historical fact, and it can be distinctly traced along its whole length. Part of it was destroyed in making the railway, which cuts through it obliquely; at this point part of the bank faced with the wall of tufa is left visible, and the great inner foss, with a paved road at the bottom of it, twenty feet below the surface, was shewn in digging the foundations of the new railway station. A street of the time of the early Empire had been made on each side of this *agger*, or bank of earth. The backs of the houses were built into the bank, which was excavated for the purpose, so that there were no back windows to the houses. From this cause the *agger* was, in this part, entirely concealed in the time of the Empire, and it is only the demolition of the houses that has brought it to light again^w.

The existence of a great outer *agger* of Tarquin is disputed by some of the local antiquaries; but it is perfectly evident that the high Wall of Aurelian is built upon older fortifications of less height, probably those called *mœnia*, which consisted of a bank and foss. Such a bank would be faced with a wall of tufa, destroyed in making the high wall, or used as a foundation for it; but the old stones were used in many parts above-ground also, as on the south side of the Prætorian camp. Several of the gates are before the time of Aurelian, as is evident from the construction and by inscriptions upon

^w The remains of some of these houses were excavated, in 1868 and 1869, by four of the young Roman Princes, who united for that purpose.

two of them*. The Wall known by the name of Aurelian is in parts also built against a scarped cliff, in many places the ground being from ten to twenty feet higher within than it is in the road on the outside of the wall.

Many of the original cities conquered by the Romans have never been inhabited since they were taken; their walls remain, but the walls only, or they are *nearly* all that remains. Sometimes a Roman colony has been settled within the old walls, probably in part to defend them, and hinder an enemy from making use of them. They were sometimes inhabited in the middle ages also, as at Gabii, where we have a medieval church made out of a tomb of the first or second century. At Veii, the *insula* was originally a detached fortress to defend the approach to the city; this became a village, and is still inhabited. Collatia became a medieval castle, now called "Lunghezza." In other cases, as at Fidenæ, the scarped cliffs and traces of the gates are all that remain visible. It was not until after the introduction of lime-mortar into general use that houses of stone began to be built, and public buildings were erected before private houses.

The seven hills were not occupied all at once, but one after the other as they were required, and each was previously inhabited and fortified as it was wanted. The Palatine was the original fortress; to this the hill of Saturn, afterwards the Capitol, was united during the life-time of Romulus, and the Aventine had been taken possession of chiefly as pasture-ground about the same period. The Coelian was added very soon afterwards; according to Varro in the life-time of Romulus, and according to Cicero about a century after his death, in the time of Tullus Hostilius. This was the traditional history, confirmed by existing remains, and that it was currently believed by the Romans in the time of the Empire, is evident from every writer on the subject at that period.

The three lower hills, the Viminal, Quirinal, and Esquiline had always been used as pasture-ground by the Sabines, who had the hill of Saturn for their *arx* or Capital, and were made part of THE CITY OF ROME by Servius Tullius, who erected his *agger* to

* The construction of the Porta Ardeatina is clearly of the first century, and of about the time of Nero, the best period of brickwork in Rome. This gate, which is between the Aventine and the Porta di S. Sebastiano, or Appia, has long been closed. The Via Ardeatina, or road to Ardea, either passed through this gate, or began there. This very ancient road can be traced

in the vineyards as far as the chapel called "Domine quo vadis," about half-a-mile on the Via Appia; at that point the Via Ardeatina goes to the right and the Appia to the left, and it is evident that the line of the Via Appia has been made to deviate to the left for a short distance in order to avoid the Via Ardeatina, which must therefore have existed when the Via Appia was made.

protect them and incorporate them in the fortifications. About two centuries of rapid growth were required before the whole were fortified, but Rome soon acquired the name of the City of the Seven Hills. It is mentioned in that manner by Terentius Varro, writing about a century before the Christian era, as a customary designation¹; and he mentions the earthworks in defining the Subura, which he says was under the wall of earth of the Carinæ, that is, the bank on which a row of wooden cottages with keels or gable-ends had been built. He further quotes Junius to the same effect².

The existing remains of the primitive earthworks and early buildings of the city of Rome can only be explained by accepting the legendary history as it was recorded in the time of the Empire. Taking the words of the classical authors of that period in their full and natural meaning, and comparing them with the remains, all is clear; the plan and arrangement of the city, and the construction of the buildings agree with this history quite as well, if not better, than with the theories of some modern writers. Sufficient attention has not hitherto been paid to the plan of the original city, as compared with other early fortified cities, or to the dates of the buildings as shewn by their construction. This deficiency it is one of the objects of the present work to supply.

The art of fortification has continued with little alteration from the time of the Etruscans, or before them, until the introduction of artillery; even in our own day it has been found that the primitive mode of fortification, by means of earthen mounds and deep trenches or ditches, is still the most effectual, and every military engineer must take advantage of the natural levels of the country.

The mounds or small hills on which Rome was built afforded excellent opportunities for making almost impregnable fortifications. Each hill was a separate fortress originally, with the sides scarped into perpendicular cliffs, a terrace at the foot of the cliff, formed by the earth thrown down in the process of scarping, and beyond that a wide and deep foss, with usually a road at the bottom of it.

There is no plan of Rome in which the ancient earthworks, elevations of the hills, and the different terraces on the sides of them in many instances, and especially the wide and deep trenches, the *fossæ* and foss-ways of the primitive fortifications, are laid down, and

¹ "*Ubi nunc est Roma erat olim septem montium demissior, . . . nominatum ab tot montibus quos postea urbs muris comprehendit.*" (T. Varro, de Ling. Lat., lib. v. c. 5, s. 4.)

² "Eidem regioni attributa Subura quod sub muro terreo Carinarium : in

eo est Argeorum sacellum sextum. Subura JUNIUS scribit ab eo, quod fuerit sub antiqua urbe ; quoi testimonium potest esse, quod subest ei loco qui Terreus *murus* vocatur." (Terentius Varro, Ling. Lat., lib. v. c. 8, s. 48.)

these have had immense influence on the whole subsequent plan and arrangement of the city^a.

The custom of scarping the edge of a hill into a vertical cliff, and building a wall up against it to support the earth in that position when necessary, is found in all primitive fortifications of the time of the early Romans, and earlier in the Etruscan cities. The custom, moreover, was continued down to the Middle Ages, the medieval fortifications in Gaul and Britain being often built on old earthworks made at the time the country was defended against the Romans, or of which they had taken possession when required, and often by the Romans themselves, who fortified their camps in the same manner. It is far more common to find a castle or fortified city of any early date on the top of a hill with scarped cliffs than anywhere else; the walls of many medieval castles are built against the scarped cliff up to the level of the hill, and the upper part of the wall is carried up on this foundation. The foss-ways of the Romans, or of their time, are found all over Gaul and Britain, protected or covered by the bank or banks on the side of them; sometimes there is one bank only, with the road in the foss by the side of it; sometimes two, with the road between them.

The order in which the hills are recorded to have been fortified in succession seems perfectly natural, and is borne out by the existing remains of the original walls of the Esquiline, Viminal, and Aventine being of rather later character than those of the Palatine. A hill or mound, of which the sides have once been cut into perpendicular cliffs, can never be brought back to its original form again; it always remains a scarped hill, however it may be concealed in parts by buildings of later ages, although the foss may be more or less filled up. The primitive *fossæ* were of very large dimensions, often twenty or thirty feet deep and very wide; such trenches are not easily filled up entirely, and may always be traced on examination^b. The width must necessarily be regulated by the nature of the ground and the situation, but the depth seems to have been

^a The plan which approaches most nearly to an accurate survey, is that of Nolli, on eight sheets, published in 1748, but in this no attempt is made to indicate the differences of level.

Canina's large map is chiefly traced from that of Nolli, with some attempt to place the fragments of the marble plan upon it. This is the best plan of ancient Rome now extant. The official plan, called del Censo, is considered to be the best plan of modern Rome, but it is not published, and is not easily ac-

cessible to strangers; it is kept in the Muncipium on the Capitol for fiscal purposes. A plan of Rome, giving the contour levels, and with the ruins carefully marked upon it, is a great desideratum. It is understood that Signor Rosa has long been preparing such a map.

^b These measurements are those given by Dionysius for the great foss of ancient Rome, but they apply equally to many others.

a general rule. At the bottom, or sometimes on the slope of the bank, half way down, of such a *fossa*, it was the custom to make a *via*, or road, called a foss-way; on the banks of the foss, buildings were erected; and when in process of time the foss was filled up, chiefly to make the gradients more easy for the convenience of carriages on four wheels, as these came into more general use, the lower parts of these buildings were of necessity buried, as we see in all parts of Rome.

To understand, then, the primitive fortifications of Rome, we must compare them with others of the same period, or of the same character; much light may also be derived from other earthworks of much later date, made after the Roman tradition by people who had learned from them. The Etruscans had usually a slip of land on the outside of their fortifications, protected by a mound and ditch, equivalent to the *pomærium* of Rome, and the Romans are distinctly said to have borrowed their plan of the fortifications from the Etruscans. Not that this arrangement is peculiar to the Etruscans, but it belongs to their period, and is continued as a general rule in all later fortifications, being almost a necessary part of them. At Arricia, where the name of *pomærium* is also applied in the same manner, the space between the scarped cliff and the outer foss may be very distinctly seen from the new bridge opposite to it.

There are certain general principles of fortification^c which appear to be natural, as we find them of all periods and in all countries, from the Etruscan cities downwards. These are,—

1. To take advantage of the nature of the ground and improve upon it. The dwellings to be defended are usually placed on the top of a hill or promontory.

2. The edges of the hill in the upper part, if not naturally cliffs, are cut or scarped into vertical cliffs to the depth of from twenty to thirty feet.

3. At the foot of the cliff is a slope, often divided into terraces, and at the bottom of the slope, if there is not a natural stream, a deep foss, or ditch, or trench is made. This is either filled with water or dry, according to the situation; it is more often dry. All primitive fortifications are on so gigantic a scale that they are often mistaken for the work of nature only, especially these great ditches, which are often called valleys^d.

4. At the inner edge of this great ditch was a bank, or paling, or

^c See "Military Architecture," by Viollet-le-Duc. at the bottom, the trench is generally artificial.

^d When there is no stream of water

hedge, or wall, or protection of some kind ; these outer fortifications were called the *mœnia*, and also the *finis* or end of the fortifications.

Each fortification usually consisted of three parts :—

a. The *arx*, or citadel, or keep, of comparatively small dimensions, and more strongly fortified than the rest, generally with a triple line of defence.

b. The dwelling-place, strongly fortified, though not quite so much so as the *arx*, generally with a double line of defence, and of larger extent.

c. The pasture-ground, usually of much greater extent than the other two, but slightly fortified with a single line of defence only on the edge of the cliff, for this is usually placed on the top of a hill also when practicable.

d. The divisions between these parts are frequently made by the hand of man. If the place is on the end of a promontory, ditches or valleys are cut right through from one cliff to the other, and thus insulate each of these parts.

Any neighbouring small hill or vantage-ground of any kind is also taken possession of and fortified as an outwork, to prevent the enemy taking advantage of it, and these are called detached forts^e.

There were also forts to protect weak points, projecting at intervals from the line of the wall ; these are connected with the wall by one end of the fort only, three sides of the parallelogram of which each consists standing clear, and the line of the foss following the projection. In the time of Romulus we had the simple fortress, but by the time of the later kings, these and other small detached forts had been placed just outside the gates, to protect them.

The general principles already described are applied on an enormous scale in the Etruscan city of Veii, within twenty miles of Rome, and the great rival of the ancient Romans until it was conquered by Camillus, and the population incorporated with the Romans and transferred to Rome. On one side, the foss or trench is cut through the solid rock to the depth of thirty feet, like the dry

^e The Romans in this country have left us a large number of primitive fortifications, which help us to understand those of Rome. There is a fine series of them on the tops of all the hills from Bristol to Weymouth. Similar fortifications were made in the fifth and sixth centuries to defend the western counties against the Saxon invaders. In these and in many similar instances we find a scarped cliff, and an outer

ditch, making a *pomœrium* between them. We also find that each fortress consisted of two parts : a small one more strongly fortified, intended for human habitation, equivalent to the inner ward or body of a medieval castle ; and a large one, equivalent to the outer bailey, less strongly fortified, and evidently intended for cattle only. There is frequently also a third part, of small dimensions, for the *arx* or citadel.

bed of a canal, with the sides vertical. The arx, the city, and the pasture-ground, are all to be distinctly traced, and there is a detached fort in a strong position at a short distance.

The same principles^f are applied in Rome as far as the nature of the ground admitted, and each hill was originally a separate fort, with its own scarped cliffs and its own foss, now forming the valleys between the hills; these valleys are natural, with *fossæ* made in them. Wherever the nature of the soil was such that the earth would not remain naturally in a vertical position, it was supported by a wall of some kind, originally of wood, afterwards of stone or brick. This is generally the case in the Etruscan cities, where the wall at the end and sides of the promontory is built against the cliff for twenty feet or more, to carry the wall above.

In Rome the soil is generally a soft tufa, which will not stand naturally in vertical cliffs. The Tarpeian rock is chiefly peperino, which stands vertically without the need of a wall to support it. The other hills have scarped cliffs and walls built up against them, except on the inner side of the Aventine, along the Circus Maximus; this, instead of being scarped, is in a series of terraces, which agrees with the statement, that this valley was a lake in the early period of the history of Rome, and so did not need to be fortified until it was drained by carrying off the water of the stream called the Marrana or Aqua Crabra, which runs through it.

Dionysius, describing Rome of the time of the Kings, says that it was defended by the cliffs on the north and south, the *aggers* on the east, and the Tiber on the west:—

“And those places which are situated upon the hills, and are strengthened by nature herself with precipitous rocks, and which [therefore] require but little protection, as well as those which are fortified by the river Tiber^g.”

The Janiculum, which is thus excluded, was originally a detached fort made by Ancus Martius, by cutting off the end of the promontory with a wide and deep foss, as may be distinctly seen from several points of view; this foss is now in the grounds of the Villa Sciarra. The Pseudo-Aventine was probably made a detached fort originally in the same manner, the promontory being isolated by cutting the great trench or valley that now separates it from the other part of the Aventine. The same thing occurs in the Etruscan

^f The same general principles of fortification are applied in many castles in England, as at Windsor, where the chalk cliff at the end and side of the promontory is supported by a stone wall for

twenty feet or more, to carry the wall above, and the places where the trenches crossed the promontory may be easily traced.

^g Dionys., Ant., lib. ix. p. 68.

city of Perugia, where the *arx* or citadel is isolated in the same manner from the rest of the city, as may be clearly seen from a short distance.

The original roads were at the bottom of the trenches, consequently at a very low level, and to obtain access from these to the platform on the top of the hills various contrivances were used: in some cases a steep *clivus* or sloping road is used, when the space is sufficient; in other instances the plan of a zigzag road up the incline is adopted, to make the ascent more easy. These zigzag roads are very usual in early fortifications.

In Rome the road up to the platform of the Coelian^h on the side opposite to the Palatine is and was a steep *clivus* only; that to the Capitol was on one side a *clivus* for foot-passengers, on the other side was by a zigzag ascent; that to the Palatine, on the east side, was in part, at least, by a zigzag also: whether the upper part was originally a steep incline, as it is now, is doubtful. In the lower part, the slope begins at the Meta Sudans; it seems probable that the upper part in what is called the *intermontium* was also a zigzag, getting gradually smaller as it ascended.

We have already said that they scarped the sides of the hills to make them more precipitous, and when the soil was a rock sometimes trusted to a perpendicular cliff only as a sufficient defence, as in Rome on the north side of the hill of the Capitol, or Tarpeian rock. In general they put a bank with a wooden palisade on the edge of the hill; this was often very like a modern *chevaux-de-frise*. They also built wooden towers at intervals, especially to defend the entrances; and we read of them as walls and towers without any mention of the material, and are apt to think they were all of stone or brick, when this was by no means always the case. Wood was extensively used at all periods, at first alone, afterwards with stone or brick, to give additional means of defence: among the sculptures on Trajan's Column are representations of wooden towers on stone walls; and the wooden hours, galleries, or scaffoldings

^h This great platform at the north end of the Coelian, was afterwards called the Claudium, but evidently belonged to the primitive fortifications, having scarped cliffs on all sides of it, and being only connected with the main body of the hill by a strip of land in the middle, on which the road and the aqueduct are carried. The Arch of Dolabella also stands apparently at the top of the entrance to the fortress

from the eastern portion of the hill. Against the vertical cliff on the northern side opposite to the Palatine, a portion of the ancient tufa wall of the time of the Kings was thrown open by the monks of S. Gregory, in their yard near the church, in the year 1870. Remains of this early tufa wall have now been found against the cliffs of each of the seven hills.

which were constantly used in medieval times, were used also by the ancient Romans ⁱ.

Julius Cæsar, in his Commentaries, describes the walls used by the Gauls as a mixture of wood and stone, which he praises for their ingenuity and strength, and it is not probable that the Romans themselves were behind their adversaries in this respect; he also describes the modes of attack and defence, which would be equally applicable in Italy as in Gaul or Britain :—

“They employ pieces of wood perfectly straight, lay them on the ground in a direction parallel to each other at a distance apart of two feet, fix them transversely by means of trunks of trees, and fill up the voids with earth. On this first foundation they lay a layer of broken rock in large fragments, and when these are well cemented, they put down a fresh course of timber arranged like the first; taking care that the timbers of these two courses do not come into contact, but rest upon the layer of rock which intervenes. The work is thus proceeded with, until it attains the height required. This kind of construction, by reason of the variety of its materials, composed of stone and wood, and forming a regular wall-surface, is good for the service and defence of fortified places; for the stones which are used therein hinder the wood from burning, and the trees being about forty feet in length, and bound together in the thickness of the wall, can be broken or torn asunder only with the greatest difficulty ^j.”

ⁱ Engravings of these may be seen in Le-Duc's “Military Architecture.”

^j Cæsar, *de Bello Gall.*, lib. vii. cap. 22.

SECTION II. THE POMÆRIUM OF THE KINGS.

IT is evident that it was at all times the custom to plant fruit-trees, such as apples and pears, in the trenches round a city which formed part of the defences, as may still be seen in most of the great fortresses of Europe, and probably in other parts of the world also. This custom is frequently mentioned in the historical books of the Bible from the earliest period, long before the foundation of Rome.

“When thou shalt besiege a city a long time, in making war against it to take it, thou shalt not destroy the fruit-trees thereof by forcing an axe against them : for thou mayest eat of them, and thou shalt not cut them down (for the tree of the field is man’s life) to employ them in the siege : only the trees which thou knowest that they be not trees for meat, thou shalt destroy and cut them down ; and thou shalt build bulwarks against the city that maketh war with thee, until it be subdued ^k.”

These trenches in Rome were from the earliest time called the *pomærium*, probably because they were chiefly orchards. In the time of the Empire, seven hundred years afterwards, the original meaning of the old local name of the time of the Kings had been lost sight of ; and the best definition of the word *pomærium* that Aulus Gellius could obtain, was *post-murum*, that is, behind the outer wall, between that and the cliff which formed the inner defences¹. This ground cannot be allowed to be built upon, and in order that it may not be wasted, it is used as a garden. In modern Rome itself, at the present time, this is the case in the great trench and slopes of the fortress of S. Angelo. In ancient Rome the Augurs gave a religious sanction to the *pomærium*, in order that the superstitious character of the people might be brought to bear for its preservation.

The Etruscan rite of marking out the *pomærium* was by perambulating the space required for the defence of the city with

^k Deut. xx. 19, 20.

¹ There is always a space left *inside* the wall, also to serve for a path for the soldiers to man the walls and for the sentinels.

The ancient Latins, equally with the modern Italians, had the word *pomærium*, *pomerium*, or *pomerio* for a place

set with fruit-trees, an orchard, *παράδεισος* ; and Seneca informs us that, at Rome, they planted *pomaria* on the tops of towers. See Senec., epist. 72. med., 122, and cf. de Ira, lib. i. c. 16, § 31 ; Controv., liv. v. c. 5 ; and Plin., Hist. Nat., lib. xv. c. 14.

religious ceremonials; they marked out the line of the trench or foss with the plough; and the earth thrown out from that foss would make a bank within it, and was called a wall.

Several writers refer to the *pomærium*. Varro writes:—

“Many built cities in Latium according to the Etruscan rite, that is, the cattle being yoked—a bull and a cow, so that the cow is on the inner side—they traced round a furrow with the plough. They were accustomed to do this, in accordance with their religion, on an auspicious day, so that they might be defended by their foss and wall. The space whence they dug out the earth they called a foss, and what was thrown up within they called a wall; next, that which formed the circle was called the *principium urbis*; that which was beyond the wall was called the *pomærium*, and by its circuit the *Auspicia Urbana* are bounded. The *cippi* [or boundary stones] of the *pomærium* are standing both round Aricia and round Rome. Wherefore also those towns which first were marked out by the encircling plough are from the *Orbis et Urvus* called URBES, and therefore all our *Coloniæ* are called in ancient writings URBES, because they were founded in the same manner as Rome, and therefore *Coloniæ* and cities are [said to be] built because they are placed within a *pomærium* ^m.”

Aulus Gellius writes to the same purpose:—

“What the *pomærium* was, the Augurs of the Roman people define in their books on the *Auspicia* by a meaning of this kind. The *pomærium* is a space marked out in certain directions within the prescribed ground along the whole circuit of the city, and this constituted the boundary of the *Urbanum Auspicium* ⁿ.”

Livy gives the following account of the word:—

“Those who consider merely the literal meaning of the word *pomærium*, interpret it as the space beyond the wall, (*post-murum*); but it is rather a space about [i.e. on each side of] the wall, which the Etruscans of old, on the founding of cities, consecrated with Augural rites, marking out the exact limits within which they intended the wall should run; so that both on the inside no buildings should be carried up to the wall (as many now commonly are actually joined to it), and also that on the outside some ground should be left free of cultivation. This space,

^m The Latin both of Varro and Aulus Gellius is very obscure, and in parts the text is probably corrupt. Above, it has been attempted to give the sense, but the original of each is here printed for the sake of reference. “Oppida condebant in Latio Etrusco ritu multi, id est junctis bobus, tauro et vacco interiore aratro circumagebant sulcum. Hoc faciebant religionis causa die auspicato ut fossa et muro essent muniti. Terram unde exculpserant fossam vocabant et introrsum factum murum. Postea qui fiebat orbis, urbis principium, qui quod erat post murum Postmoerium [Pomerium alia MSS.] dictum, ejusque ambitu auspicia urbana finiuntur. Cippi pomeri stant et circum

Ariciam et circum Romam. Quare et oppida quæ prius erant circumducto aratro, ab orbe et urbo [urvo alia MSS.] Urbes; et ideo coloniæ nostræ omnes in literis antiquis scribuntur URBEIS [URBES alia MSS.] quod item conditæ ut Roma, et ideo coloniæ et urbes conduntur [conditur alia MSS.], quod intra pomerium ponuntur.” (T. Varro de Ling. Lat., lib. v. c. 32.)

ⁿ “*Pomærium* quid esset, augures Populi Romani, qui libros de auspiciis scripserunt, istiusmodi sententia definirunt: *pomærium est locus intra agrum [aggerum] effatum per totius urbis circuitum pone muros regionibus certis determinatus, qui facit finem urbani auspicii*.” (Aulus Gellius, lib. xiii. cap. 14.)

which it was against the law either to build upon or to plough, the Romans called the *pomærium*, not because it was more especially beyond the wall, than because the wall was beyond it; and always, on increasing the size of the city, as far as they intended that the walls should be advanced outward, so far were these consecrated limits extended °."

The following passage from Dionysius may also be added :—

"When everything was performed which he conceived to be acceptable to the gods, he called all the people to a place appointed and described a quadrangular figure about the hill, tracing, with a plough drawn by a bull and a cow yoked together, one continued furrow designed to receive the foundation of the wall^p. From whence this custom remains among the Romans of tracing a furrow with a plough round the place where they design to build a city. After he had finished these things, and sacrificed the bull and the cow, and also begun the immolation of many other victims, he set the people to work^q."

We thus see that the earliest writer who describes the *pomærium* is Terentius Varro, who wrote more than a century before the Christian era. The only two instances he mentions in which this name is used are Rome and Aricia; the latter is fourteen miles from Rome, and has similar early fortifications, with the bank on the slope, (called the *pomærium*,) between the inner wall or cliff, and the outer wall or bank with the foss^r.

Aulus Gellius implies that in his time it was a technical word, and turns to the books of the Roman Augurs for an explanation; from them he concludes, as Varro had done before, that the derivation of the word is *post-murum*^s.

° "Pomærium, verbi vim solum intuentes, post-mœrium interpretantur esse. Est autem magis circa murum locus, quem in condendis urbibus quondam Etrusci, qua murum ducturi erant, certis circa terminis inaugurato consecrabant: ut neque interiore parte ædificia mœnibus continuarentur, quæ nunc vulgo etiam conjungunt; et extrinsecus puri aliquid ab humano cultu pateret soli. Hoc spatium, quod neque habitari neque arari fas erat, non magis quod post murum esset, quam quod murus post id, pomærium Romani appellarunt: et in urbis incremento semper, quantum mœnia processura erant, tantum termini hi consecrati proferebantur." (Livii Hist., lib. i. cap. 44.)

^p This wall could not be the one on the top of the hill against the scarped cliff, for it would have been impossible to trace out that with the plough; it must have been at the foot of the hill, where alone a line could be traced out

with a plough, by which the trench was begun, and the earth from that trench being thrown up within the line, formed a mound or *mœnium*, on which there would be a wooden palisade. Such a defence is often called a wall, which does not necessarily mean a stone wall.

^q Dionys. Ant., i. 88.

^r It appears, however, that the Romans sometimes took this name with them. Although it is not mentioned by any author as applied to other places, it occurs on an ancient Roman inscription found at Besançon in 1743, printed by Orellius, No. 3,684, in vol. ii. from the *Mercure Suisse* of January in that year, but considered as of doubtful authority :—

POMOERI VESVNTION.

^s It has been suggested that, notwithstanding the authority of Terentius Varro and the other writers, it might be a doubtful question whether *pomærium* (as

The word, so far, might be well applied to the slip of land outside the chief wall, but within the *finis* or outer wall; this was a necessary part of the fortification, except in special situations, as on the top of a cliff, overhanging a river. Wherever the slope of the cliff was gradual enough, there was a *pomœrium*, but it was certainly a technical, perhaps a local, name^t.

Livy, however, considers that originally a space was left unoccupied both *inside* and outside the wall, to which the name was applied. This became soon built over, the injunctions of the Augurs being disregarded. The outside of the wall was not so desirable, especially in times of war, and so was left unoccupied, and thus the word came to be applied to that part only. It is quite possible that during the rapid extension of Rome, when the outer side of the wall was built against (and there are many remains shewing this to have been the case), the word became lost altogether.

it is spelt in Aulus Gellius and Livy, or *pomerium* as it is spelt in Tacitus,) originally meant anything more than orchard. The apple is a favourite fruit in Rome, the climate being very suitable for it. This is likely, it is contended, to have been the case in all ages, and the original inhabitants of the Palatine Hill, when that was the Roma Quadrata, would have no room for orchards on the hill itself, whereas the strip or terraces of land, on the slope of the hill, were exactly suited for that purpose. The great *pomœrium* of Rome, of a later period, was at all times largely occupied by fruit gardens, as it still is. Varro himself seems elsewhere to hint at this derivation:—

“Hujusce inquam pomœria summa sacra via ubi pomi veneunt contra aurea imaginem.” (T. Varro, de re Rustica, c. 2.)

^t In England it is sometimes called the Slype, as in Oxford, or the Slopes,

as at Windsor, sometimes the Lists; in France the *Lices*.

“The name of lists (*lices*) was given to an external wall or palisade of wood, formed beyond the walls, which formed a kind of covered-way; the lists were almost always protected by a shallow moat, and sometimes there was a second ditch between them and the town walls. By an extension of the term, the name of lists was given to the space comprised between the palisades and the town walls, and even to the external *enceintes*, when, at a later period, they were built of masonry and flanked by towers. The palisades which surrounded a camp were also called *lists*:—‘Licæ, castrorum aut urbium repagula.’ *Epist. anonymi de capta urbe CP.*, ann. 1204, apud Marten., vol. i. Anecd., coll. 786: ‘Exercitum nostrum grossis palis circumcinximus et liciis.’” (Military Architecture, by Viollet-le-Duc, p. 39, 8vo. Oxford, 1860.)

SECTION III. THE PALATINE.

THE Palatine, the Coelian, and the Aventine had not been originally occupied, being so much less strong than the other hills. These were taken possession of by the new settlers: at first the Palatine only, and to make this secure it was necessary to have two wings to it; one to keep up the communication with the Tiber, then the highway for provisions and materials of all kinds. This wing was called the Velabrum, and it is probable that when the water in the Tiber was high enough, boats could sail up to the foot of the Palatine in a sort of port formed by the mouths of the small streams that run down from the Palatine on both sides, and from part of the Quirinal, passing between the Palatine and the Capitol, and by a branch of the small river Almo, now the Marrana, the small stream that runs round the base of the Coelian, and then between the Palatine and the Aventine, where it formed a marsh, which served as a protection to the west side of that hill.

On the eastern side another protection was necessary, and another wing was formed by digging a great trench at the foot of the Esquiline, leaving a space for a fort, to defend the approach on that side. This wing was called the Velia, which was always considered as part of the Palatine. The trench outside of the Velia remains, with the earth, supported by a wall on each side of it, and in this trench is a road, now called Via del Colosseo. This trench is about twenty feet below the level of the ground on the hills on each side, and forty feet wide; it has a row of houses down the eastern side of it, and the present road or street on the western side. The cliffs are vertical, and supported by walls, and trees may be seen growing on the ground nearly level with the top of the wall on each side. On the east side it is behind the houses, and nearly level with the top of them. To the west of this trench is the Velia, an earthen fortress, which is nearly triangular, and one corner at the north end of it is cut away to admit the great Basilica of Constantine. This and the Arch of Titus opposite to it stood on the Summa Via Sacra, from which the Clivus Sacer descended to the Via Sacra, and thence to the Forum Romanum on the north.

The temple of the Lares was on the Summa Via Sacra, as men-

tioned by Solinus^u, and therefore on the platform to the north of the Colosseum, between that and the Forum Romanum.

To the south another road descends rapidly to the Colosseum and the Arch of Constantine. This appears to have been afterwards made a covered way by the buildings over it, but the incline or *clivus* is probably natural or very ancient. The Arch of Titus, therefore, stands close to the natural position for the principal gate of the city of Romulus on the Palatine, and there are remains of a very early gate near this spot. From thence a zigzag road would turn at an angle up to the platform on the surface of the Palatine. This hill has so long been built over, and the buildings renewed so many times, that it is difficult to see the original plan. Nevertheless, the demolition of the buildings, and the excavations, have brought a great deal of it to light. It is easy to see that the upper part of the hill has had the edges cut into vertical cliffs, with terraces under them, as in other primitive fortifications. These cliffs are now visible in several places behind the walls, in which holes are made and left open for the purpose of shewing the natural rock, extending as high as the wall and the surface of the hill. The natural soil here being friable, the cliff required to be supported, and this would commonly be done at first with wood only; but Romulus appears to have begun a stone wall immediately. Part of this wall remains at the north end towards the west, and round the corner on the west side, near the church of S. Anastasia. The architectural character of this wall is exactly the same as that of Fiesole, Volterra, Perugia, and other Etruscan cities, where the building material is the same.

This kind of stone, called *tufa*, naturally splits into oblong blocks of large size, and of these blocks the walls are built; the stone has only been split off the rocks with wedges, not cut with the saw, and there is no original cement, or at least no lime-mortar. Along the north end of the hill, opposite to the Capitol, the foundations of towers of the same period remain at regular intervals, evidently left unfinished and built over in the time of the Republic, of the Empire, and in the Middle Ages; but all these buildings being now destroyed, the original foundations have been brought to light within the last few years^x. This north end of the Palatine was the Arx or Citadel of Romulus^y, that was betrayed by Tarpeia to the Sabines on the Capitol opposite.

^u "Ancus Martius (habitavit) in Summa Sacra Via, ubi ædes Larium est." (Solinus, c. i. 23.)

^x They are shewn in some of my photographs, with walls of the time

of the Republic and early Empire built upon them and against them.

^y Plutarch in Romulo says that Tarpeia betrayed the Capitol and not the Palatine to the Sabines, and that for

There was a zigzag road up the cliff, at the north end of the hill, leading from the junction of two streams which still run underground near where S. Georgio in Velabro now stands, and where the Janus or Arcus Quadrifrons is placed. This was the boundary of the Palatine fortress in that direction, and the zigzag path led up from that to the Porta Romana, near the east end of the north front². On the west side there are remains of the old stone wall in several places, over S. Anastasia as well as under it. After passing the south end of that church the wall turns to the east, across the Palatine, towards the Arch of Titus. Part of this wall on the south side of the Citadel of Romulus is visible below the cliff, on the terrace, and another part above in what were long the Farnesi gardens, afterwards occupied by the Emperor of the French, and excavated at his expense; it supports the cliff on the north side of the foss. The Villa Mills stand on the cliff on the south side of this foss, and on that side of the foss the earth is for the most part supported by a concrete wall only; but a fragment of the ancient tufa wall has recently been brought to light in the lower part against the side of the road of the time of the Empire, which goes up to the level on this side. In this great foss (which Signor Rosa considers to be a natural *intermontium*) various buildings had been erected in the time of the Republic and down to the time of Augustus. The later Emperors carried their great palace where the state apartments for the grand ceremonies were situated, over the foss on the level of the surface of the hill, and made subterranean chambers of the old buildings that stood there before.

The zigzag road leading up to the ARX at the north end of the Palatine opposite to the Capitol is still in use for carts part of the way, along one branch, passing from the site of the lake of Curtius at the foot of the lofty bridge for the Aqueducts, up the slope to the terrace on which stands the altar to the unknown goddess, in front of the wall of Etruscan character against the cliff, behind which is the ancient cistern. The house of Romulus, or cottage of Faustulus, is said to have stood near this, on the angle of the platform not far from the church of S. Anastasia. The road turns at an angle just where that piece of the old wall is situated, and goes on nearly

this reason the Capitol was called *Rupes Tarpeia*. Livy and Dionysius do not agree with Plutarch in this. The portion of the rock so called was the place of public execution, and this name was given to it to perpetuate her infamy.

² A remarkable confirmation of this

has been shewn by the excavations of 1871: remains of an ancient wall of tufa have been found close to the Arch of Janus, the stones of which correspond exactly in size and in character with those of the Wall of Romulus against the cliff on the hill above.

on a level to the gate called the *Porta Romana* or *Romanula*, which is just over that end of the bridge of *Caligula*, of which two of the tall brick piers remain *in situ*. Passing through that gate, the pavement of the old road continues up to the corner of the hill under a part of the palaces of the *Cæsars* of the first century. The lower part of the road has been altered, and raised from ten to twenty feet above the old level. The tops of the arches of the arcade, or of shops (?) by the side of it, are visible close to the ground near the round church of *S. Theodore* (supposed to stand on the site of a temple of *Vesta*). This road, coming from the south, evidently went originally to the *Janus* or *Arcus Quadrifrons*, which was the entrance into the *Forum Boarium* to the west; the *Forum Romanum* was to the east, and the *Capitol* to the north. The silversmiths' quarter was near the *Forum Boarium*, where stands the arch of *Sept. Severus*, called of the silversmiths by the inscription. The *Aqua Argentina*, rising in the *Lupercal*, or *Wolf's Cave*, falls into the *Cloaca Maxima*, near to the south side of this *Janus Quadrifrons*. The modern road is called the *Via dei Fenili*, and leads into the *Via de' Cerchi*, made on the side of the *Circus Maximus*, under the west side of the *Palatine*, parallel to the old street which is now subterranean, but which led in the same direction, to the *Septizonium* and the *Porta Capena*. The cave called the *Lupercal* is nearly under the angle of the present *Via dei Fenili* and the *Via dei Cerchi*, almost in the *Circus Maximus*^a.

This northern part of the hill only is supposed by some to have been *Roma Quadrata*^b, the *Arx* or citadel of *Romulus* separated

^a It is nearly under *S. Anastasia*, with the springs of water, as described by *Dionysius*, "*Aqua cernens quatuor scaros sub æde.*" This *ædes* must have been the very early temple on the corner of the hill, above *S. Anastasia* (excavated in 1871). By some it is considered to have been on the same site as those that were rebuilt in the second century on a higher level, now called by *Signor Rosa* the *Basilica Jovis*. The structures of the time of the Republic under that platform, whatever their purpose was, were originally built in the great foss of *Romulus* (or *Intermontium*), in the middle of the *Palatine*. The passage in *Tacitus* is thus reconciled with that of *Solinus* (c. i. p. 18): "*Dictaque est primum Rōma quadrata, quod ad æquilibrium foret posita. Ea incipit a sylva quæ est in area Apollinis, et ad supercilium scalarum Caci habet terminum*

ubi tugurium fuit Faustuli. Ibi Romulus mansitavit, qui auspicato fundamenta murorum jecit."

Dr. Fabio Gori (in his work entitled *Sugli Edificii Palatini. Studi topografico storici*, Rome, 1867, 8vo.) claims to be the first person to point out this manner of reconciling two passages in the classical authors which had long been considered as inconsistent one with the other, and inexplicable.

^b *Solinus*, cap. i, says that Rome first was called *Square* because it was equipoised (*quod ad æquilibrium foret posita*), thus applying the epithet *quadrata* to the whole town; *Salmasius* endeavoured to shew that the author of the *Polyhistor* was mistaken. (*Claudii Salmasii Plinianæ Exercitationes*, &c. p. 11, col. i, B. *Trajecti ad Rhenum*, 1689, folio.)

from the southern part by the wide and deep trench or foss. Excavations made in 1869 and 1870 have brought to light remains of the tufa walls and towers on both sides of the trench supporting vertical cliffs, and at the west end of the arx there are other remains^c. The wall on the north side is that now called the Wall of Romulus.

The traces of the ancient earth-works are an important part of the evidence on this subject. We find in many of the excavations that are made in Rome, the old pavement of the street at the depth of from fifteen to twenty feet below the level of the soil, because they were made at the bottom of the old *fossæ* or trenches. These old pavements remain on all sides of the Palatine, and are left open in several places.

1. Under the Arch of Janus, traditionally the starting-point of the bull and the cow. 2. Under the church of S. Anastasia, in the street called after Julius Cæsar, who perhaps rebuilt the houses or shops under the terrace there. This was part of the *infama nova via*, under the porticoes or arcades that supported the lower terrace of the Palatine, on the side of the Circus Maximus, and it can be traced all along that side to the sites of the Septizonium and the Porta Capena. 3. Under the Arch of Constantine, and round the Meta Sudans. 4. In the Forum Romanum also, at the same level^d as the others.

The southern part of the Palatine, with the Velia and the Velabrum, formed the city of Romulus as distinct from his citadel. The construction of the Wall of Romulus round his arx is of earlier character than that of any other wall in Rome^e.

The regular square surface of the Palatine, and its steep cliffs on all sides, justifies its choice in preference to the larger Aventine, which was also of greater extent than was required for the original settlement, and would not so easily be fortified and defended.

“It was the design of Romulus to found a city upon the Palatine, both for other reasons, and on account of the good luck of the place, which had been the means of saving and rearing himself and his brother. But Remus desired to found it on what is called from him Remuria. This is a spot suitable for receiving a city, an eminence not far from the Tiber, and distant from Rome about thirty stadia^f.”

^c The form of this Arx is oblong, not square; but the stones in the walls called by Vitruvius *Opus Quadratum* are also oblong, not square.

^d The Italian Government are now (1871) excavating the whole of the Palatine Hill down to the level of the old pavements, and there is every probability that all these long-disputed

and doubtful questions will now be settled beyond dispute.

^e The construction of the walls of Fiesoli, of Perugia, of Gabii, and of Alba Longa (the small portion that remains), is also identical with this of Romulus.

^f Dionys. Hal. Ant., i. 45.

“But when they had set out to found a city in common, straightway there arose a difference about the site. Romulus desired to found what is called ‘Roma quadrata,’ which means quadrangular, and to build a city on the spot; but Remus was in favour of a strong position on the Aventine, which from him was named Remuria, and is now called Rignarium^g.”

The platform of the hill was fortified by scarping the cliff of the upper part and making terraces below, forming a zigzag approach from the foss-way at the bottom to the top of the hill.

“Raising the wall of the Palatium with loftier terraces so as to be a secure defence to those within, intercepting by a ditch the heights which lay over against it, and surrounding them with strong ramparts [or palisades^h].”

In the following passage we have the deep ditches and high walls both mentioned :—

“After the *ditch*, therefore, was finished, the wall perfected, the necessary structures of the houses completed, and the juncture required they should consider also what form of government they were to establish, Romulus called the people together by the order of his grandfather, who had also suggested to him what he was to say, and told them that, indeed, ‘The city, considering it was newly built, was sufficiently adorned both with public and private edifices : but he desired they would all consider that these were not the most valuable things in cities. For neither in foreign wars *are deep ditches and high walls sufficient*ⁱ.’”

Having obtained a general notion of what the *pomærium* is, we come to the special application of the word to the limits of the city of Romulus. There has been much dispute as to this line of the boundary or foss, the arguments resting upon the interpretation given to an important passage in Tacitus.

Tacitus writes :—

“But it is well, I think, to know as to the beginning of the building [of the city], and what was the *pomærium* which Romulus made [round it]. The furrow, then, which marked out the line of the city was begun from the (1.) Forum Boarium, . . . so that it should include the great altar of Hercules. Thence the [boundary] stones were cast in at regular distances, [namely], at the (2.) altar of Consus, next at the (3.) old Law Courts, then at the cell of (4, 5.) Larunda, or the Lares, and at the Roman Forum; and the Capitol [which?] is believed to have been added to the city, not by Romulus, but by Titus Tatius^k.”

^g Plut. Rom., c. ix.

^h Dionys. Ant., ii. 37.

ⁱ Ibid., 3.

^k “Sed initium condendi et quod *pomerium* Romulus posuerit noscere haud absurdum reor.

“Igitur a *foro Boario* ubi æreum tauri simulacrum aspicimus, quia id genus animalium aratro subditur, sulcus designandi oppidi cæptus, ut *magnam Herculis aram amplecteretur*.

“Inde certis spatiis interjecti lapides, per ima montis Palatini,—ad *aram Consii*,

“Mox ad *Curias veteres*,

“Tum ad *sacellum Larundæ* [*Larium*],

“*Forumque Romanum*; et Capitolium non a Romulo sed a Tito Tatius additum urbi credidere.” (Taciti *Annales*, xii. 24.)

The position of these stations has long been and still is matter of dispute and discussion among Roman antiquaries. The evidence is very slight, as the existing remains are so scanty, still they are sufficient to shew that there is little doubt that the whole of the Palatine Hill, with some space round it beneath (as the expression *per ima montis* of Livy implies) was included. The testimony of Aulus Gellius¹, “that the *pomœrium* of Romulus was bounded by the *radices* or lower extremities of the hill slopes,” implies this also.

It has, however, been supposed by some writers that the whole platform of the hill was not occupied by the Roma Quadrata, and that there was a foss across the middle of the hill ; this may now be clearly traced, and there are remains of the early tufa walls of Romulus(?) on each side of it.

It remains, therefore, to point out the stations, as nearly as they can be ascertained from existing remains, along the probable line of the foss.

All agree that the position of the *Forum Boarium* was at the western corner of the Palatine, though at some distance from the base of the cliff and extending to the Tiber, and that the modern Piazza della Bocca della Verità occupies a good part of its site. The line of the furrow (*sulcus*), starting from this forum, is said to have included the great altar of Hercules^m, which was certainly near to the Ara Maxima. It will be shewn, in the Appendix to this Section, that this altar was probably in front of the church of S. Maria in Cosmedin.

From this point the *cippi* were, we are told, directed to the (2.) *Ara Consi*. No remains of this altar having been yet discovered, we have to fall back upon the incidental mention of it by Tertullianⁿ, who says that it was near the Meta of the Circus Maximus, and by Dionysius, who says :—

“The Romans, even to this day (the time of Augustus), continue to celebrate the feast then instituted by Romulus, calling it *Consualia*, in which a subterranean altar placed near the Circus Maximus, the ground being sunk for that purpose, is honoured with sacrifices and burnt offerings of first-fruits, and a course is run both by horses in chariots and by single horses. The god to whom these honours are paid is called Consus by the Romans^o,” &c.

¹ “Antiquissimum autem pomœrium quod a Romulo institutum est, Palatini montis radicibus terminabatur.” (Aulus Gellius, lib. xiii. c. 14.)

^m Livy (lib. x. c. 23) mentions the *round temple* of Hercules in the Forum Boarium, and as the form of a temple was not often changed, this gives some probability to the opinion of Donatus,

that the round temple of the time of the empire, now called the Temple of Vesta, and on the side of the Forum Boarium next the Tiber, is on the site of the Temple of Hercules of the time of the Kings.

ⁿ “Consus, ut diximus, apud metas sub terra delitescit.” (Tert. de Spect. 8.)

^o Dionys. Ant., ii. 2, 31.

“The god in whose honour they celebrate this festival is called Consus, which some who translate the name into our language declare to mean Neptune, shaker of the earth, and for this reason, they say, he is honoured with a subterranean altar, because this god ‘holds’ the earth. But I am acquainted by hearsay with another account, that the festival was held, and the races exhibited, in honour of Neptune; but the subterranean altar was afterwards erected to some god whose name it is unlawful to divulge, who presides over and guards secret counsels. For nowhere on earth, either by the Greeks or by the barbarians, has a concealed altar been erected to Neptune. How the truth stands it is difficult to say ^p.”

Plutarch also refers to the altar :—

“A report was spread by him [Romulus] that he had found the altar of a certain god hidden beneath the earth, and they named the god Consus, either because he gives counsel, for even at this day they call the council of the nation ‘concilium or consilium,’ and the chief magistrates ‘consuls or counsellors,’ or because he is the equestrian Neptune. For the *altar is in the largest of the circuses, concealed at other times*, but uncovered on the occasion of the equestrian games. But others without hesitation express their opinion that while counsel is undeclared and concealed the altar of the god with good reason remains concealed, but when it is declared, it exhibits a splendid sacrifice on the occasion, and games and a public spectacle by proclamation ^q.”

The existence of a cave near this end of the Circus Maximus and beneath the foot of the Palatine Hill is an important fact, and there can probably be little doubt that the position of this altar was there, namely, about twenty feet below the level of the Via de Cerchi, near the corner where it is crossed by the Via di Fenili. It is the same as the Lupercal of Augustus.

It is, further, more than probable that the water, which at the present time is flowing from this cave, is the *Aqua Cernens*, called also the *Aqua Argentina*; and the extensive cave and vaulted chambers over the spring, still remaining, were probably connected with the altar that stood either in or near them. The abundant supply of water at all times would be convenient for the sacrifices of oxen to be slaughtered there. This cave has recently been explored and described as the Lupercal; the situation of it closely agrees with the description of the classical authors ^r.

We come next to the (3.) *Curia veteres*, or ancient Law Courts. These are mentioned in the catalogue of the Regionaries in the fourth century as in the Palatine Region, but no remains have been found to which the name would apply.

The site of the (4.) *cell of Larunda*, or of the *Lares*, is not known,

^p Dionys. Ant., ii. 100.

^q Plut. Rom., c. xiv.

^r See “The Lupercal of Augustus,” &c., a lecture by Dr. Fabio Gori and

J. H. Parker, printed for the British Archæological Society of Rome, 1869, when it had been recently discovered.

but if the places mentioned by Tacitus are in regular order, it was probably near the eastern corner, the Meta Sudans, and the Arch of Constantine.

The *Forum Romanum* (5.), about which there can be no doubt, then comes naturally as the fourth corner.

The Capitol possibly was not intended by Livy to be included in the list, but if it was it seems to be in its right position in the order followed: not that the Capitol would be included in the boundary marked by the *cippus*, but the stone may well have been at the base of the hill. In the same manner it is probable that the whole space afterwards occupied by the Forum Romanum was not included, but that the *cippus* stood somewhere in it.

The main evidence, however, should be looked for in the nature of the ground and the traces of ancient earthworks. At the foot of the hill the ancient foss-way may still be traced on two sides, and on part of a third; the fourth side is recorded to have been a marsh at the time the city was founded; we should, therefore, not expect to find a foss on that side. On the north-east side the foss became the lower part of the Via Sacra. On the south-east side it became the Via di S. Gregorio. There was a lake or gulf (that of Mettius Curtius) on part of the site of the Forum, through which the stream of the Fons Juturni ran, after passing from the spring, near the Arch of Titus; under the north-east side of the Palatine, and then through the Velabrum into the Tiber. The Circus Maximus bounding the south-west side, was also marshy ground till drained by the Cloaca Maxima.

To understand a description of the Palatine, we must bear in mind that though its shape is square, it stands diamond-wise to the points of the compass; it has the Capitol entirely due north, the Esquiline to the north-east, the Cœlian to the south-east, and the Aventine to the south-west, each separated from it by the intervening valley and foss.

At the foot of the steep cliff and wall supporting it, on all sides of the Palatine was a bank, and upon this bank a magnificent terrace was built by the early Cæsars, of the fine brickwork of that period, of which the substructure, consisting of lofty vaulted chambers, remains in many parts, and the surface of the cliff is concealed by this. In other parts the demolition of these great brick terraces of the Cæsars has brought to light the more ancient walls, which had long served for foundations to them, and were entirely concealed in the time of the Empire and long afterwards.

There are thus two distinct terraces at different levels on all sides

of the Palatine ; one on the north-east, where the Via Sacra was made, one between the Palatine proper and the Velia, which was the Summa Via Sacra, or upper Via Sacra, and on this a market for apples was held in the time of the Republic, as related by Varro^s, and he also mentions a tradition of his time, that there had been originally an orchard on this site^t. This market was continued in the time of the Empire.

It was the usual custom of the ancient Romans, as of other primitive people, to make the main roadway, or *via*, below the terrace, at the bottom of the foss^u, and thus the ancient roads, although now raised to the level of the ground, often enable us to trace distinctly the ancient *fossæ*. The lower Via Sacra was at the bottom of the foss until after the commencement of the Empire, when the fashion of raising the roads to a higher level had begun in Rome. The churches standing on the outer bank of the old foss, and at the foot of this part of the Esquiline, shew the alteration of the level very distinctly. One at the south-east corner of the Forum, which was originally the temple of Antoninus and Faustina, now the church of S. Lorenzo in Miranda, has the lower part of the columns of the portico excavated to the original level of the top of the steps, which descended still lower to the ancient *via* many feet below the level of the present road, and the lower part of the old temple is made into a crypt under the present church. Another, originally the temple of Romulus, the son of Maxentius, is now part of the church of SS. Cosmas and Damian ; the lower part of the old circular temple, on a level with the old *via*, is turned into the crypt of the church. The upper church, built early in the sixth century, is on a level with the present *via*. The original doorway of this temple was also on the top of a flight of steps from the lower Via Sacra and on a level with the present floor of the crypt, but it has been removed, and replaced twenty feet higher when the upper church was rebuilt in the sixteenth century.

The Basilica of Constantine, further to the south-east along the same line, partly cut out of the ancient earthwork called the Velia, is on the same level as the upper Via Sacra, and opposite to the

^s T. Varro, de re Rustica, c. 2.

^t "Ad corneta Forum Cupedinis a Cupedio ; quod multi Forum Cupedinis Cupiditate. Hæc omnia posteaquam contracta in unum locum quæ ad victum pertinebant, et ædificatus locus : appellatum Macellum, ut quidam scri-

bunt quod ibi fuerit ortus." (T. Varro, de Ling. Lat., v. 32.)

^u Such a road was called a foss-way, or covered way, the soldiers marching along it being covered or protected from the wind and from the observation of enemies.

Arch of Titus. The Clivus Sacer went up to this point from the door of the round temple of Romulus. This *clivus* is now nearly all buried, but the upper part of the sloping pavement has been excavated and left visible.

On the south-eastern side of the Palatine the ancient foss remains, the present Via S. Gregorii, leading to the south end of the Circus Maximus^v. The level of the road has been raised considerably, but this was done before the Arch of Constantine was built, this arch being of the usual proportions.

On the south-west side, the site afterwards occupied by the Circus Maximus, was a lake formed by damming up the stream of the Almo, which still runs through at the bottom of it. We read in Varro^x of persons being ferried across this lake from the bottom of the steps on the south side of the Palatine to the Aventine opposite. He also says that the Velabrum was so called because vessels could sail up it, and so ascend to the *infima nova via*.

On the north-western side the ancient foss-way probably passed under the present Arch of Janus, where the old pavement remains, many feet below the present road, and the direction of this lower road may be seen leading from the Forum Romanum to the Forum Boarium, at the northern end of the Circus Maximus. The Forum Romanum, originally the great market-place, was made in part of the foss, between the Palatine and the Capitol, as mentioned by Dionysius.

“Romulus and Tatius immediately [after the peace] enlarged the city, . . . and cutting down the wood that grew on the plain at the foot of the Capitoline Hill, and filling up the greatest part of the lake, which by lying in a hollow place always abounded with water that came down from the hills, they converted this place into a market-place, which the Romans continue to make use of even to this day. There they held their assemblies, transacting their affairs in the Temple of Vulcan, which stands a little above the Forum^y.”

The WALLS against the cliff at the north-west end of the Palatine

^v The Via dei Cerchi, or Circus road, is modern, made since the Circus was destroyed, and runs along the edge of it, close under the terrace or balcony on that side of the Palatine, and opposite to that part of the Aventine where the church of S. Prisca now stands, on the site of the temple of Diana. This part of the Aventine was called Remurra, and the marsh or lake between this and the Palatine, Murcus, or more frequently Vallis Murcia. “Circus ad Murcim vocatum.” (T. Varro de Ling. Lat., v. 43. “Murciæ Deæ sacellum erat sub monte Aventino qui antea

Murcus vocabitur.” (Festus, in voce.)

^x . . . “Nam olim paludibus mons erat ab reliquis disclusus itaque eo ex urbe advehentur ratibus, cujus vestigia, quod que cum aqua dicitur Velabrum, id inde ascendebat ad infimum novam viam.” (Varro, de Ling. Lat., v. 7, p. 49, ed. Spengel, 1826.)

^y Dionys. Ant., ii. 53. According to one interpretation the passage from Tacitus is made to imply the same: “Forum Romanum et Capitolium non a Romulo, sed a Tit. Tatius additum urbi credere.” (Taciti Annal., lib. xii. c. 24.)

opposite to the Capitol are of the highest interest, and may be called a key to the whole early history of Rome and of architecture. The construction of three distinct periods is here plainly marked, and the succession of them is shewn in such a manner that there can be no mistaking them or disputing them. At the western end of this face of the Palatine there is the wall of distinctly Etruscan character, extending for the length of fourteen or fifteen yards, built up against the scarped cliff on the top of the hill. This is now generally called the wall of Romulus, and could hardly have been built at any later time, because, after the Capitol and the Palatine were made into one city, there was no need of a strong fortification between them.

This wall is of the usual character of those called the walls of the Kings or the Etruscan walls, and is exactly like the wall of the Etruscan city of Fiesoli and many others, where the same building-material is found. It is built of large quadrangular blocks of tufa split off the rock, not cut with any tool, and put together without lime-mortar or cement of any kind. Such a wall might be of any period, as being the cheapest mode of building with that material; but against this, and in some parts upon it, walls of the well-known character of the Republic and of the Empire are built.

Behind this wall also, on the eastern side of it, is a large cave-cistern, or reservoir of rain-water, excavated out of a soft bed of the tufa rock of the cliff between two hard beds. It has been enlarged at different times, and a *specus* or channel for carrying the rain-water into it from different parts of the hill has in one or two places been made. In the natural vault or rock above are three circular openings of the shape of a funnel reversed, that is, the wider part at the bottom, evidently used as wells to draw up water from the cistern. This great cave-cistern is almost an exact copy of one at Alba Longa, by the side of the citadel, only the one at Alba appears evidently older, and the rock is harder, so that no cement is used there. On the Palatine cement is used, both to line the cistern and the funnels; but this is possibly of later introduction, and may have been originally clay only, such as was usual in the early aqueducts. Upon the surface of the wall there is a coat of the calcareous deposit from water.

In continuation of this wall of Romulus is a considerable piece of the wall of the Republic, probably of the time of Sylla, built of concrete the whole height of the cliff, about thirty feet. The surface in this is divided by a series of vertical grooves of large size, evidently where beams of timber have been inserted to support the concrete when fresh. These have decayed or have been removed,

and have left the places they occupied as a sort of large grooves, giving the wall at a distance the appearance of being panelled.

This mode of strengthening the wall originally, by inserting wooden posts and horizontal beams at short intervals, shews that the builders were more accustomed to the use of wood than of stone or brick at the time these walls were built. The plan of using wooden posts in forming concrete walls was afterwards commonly adopted in foundations, which were cast with wooden sides, to be withdrawn after the concrete had set. But this lofty wall of the Palatine to support the cliff was not a mere foundation, and it is probable that the woodwork was left for greater strength until it decayed. People accustomed to support the earth of a cliff with wooden walls, would naturally have more confidence in them than in concrete walls when lime was a novelty, and they could not tell how durable it would prove.

The material of the hill is crumbling tufa, and one object of the wall was to keep this in a vertical position, and prevent its slipping down, as it has done in many other parts of the old fortifications. Here, as in other places, one of the objects of the structure of the Cæsars was to prop up this old wall with the earth behind it².

The appearance of panelling is still further increased by horizontal lines across the vertical ones; one of these horizontal grooves is partly filled up by a terra-cotta water-pipe, conveying water in the direction of the old cistern, of the character of the time of the Kings. This rudely-panelled wall of concrete extends for twenty or thirty yards; beyond this comes a brick wall of the Empire, and in this the terra-cotta water-pipes are of larger size, and carried straight down to the drains instead of being horizontal, because in the time of the Empire the aqueduct of Nero had been made, and the rain-water reservoir was no longer required.

It is the theory of some Roman antiquaries that the two old walls are merely rough constructions of the time of the Empire, under the great brick terraces which were built up against the cliffs of the Palatine to enlarge the surface at the top, and which have since been destroyed by being used as old materials for other buildings. But it is far more probable that the destruction of these large terraces has brought to light the older walls which were indeed used

² Professor Ferrier examined the soil of the Palatine Hill with the writer in the spring of 1866, and came to the conclusion that no part of it would have been a vertical cliff naturally, and that

the earth could not stand long in a vertical position unless supported in some way, either by boarding, or by a wall of stone or brick.

to support them, but were found there ready for use, not built in the time of the Empire.

Along this end of the Palatine are foundations of the square towers of Romulus at regular intervals, the back wall and the lower part of the side walls of each only remaining, the rest having been either destroyed when the towers were built, or never completed.

The old square towers of the time of the Kings, which have been excavated under S. Anastasia, are of later character than the time of Romulus; they are in the same style as the Pulchrum Littus on the Tiber, and possibly belonged to the buildings of the Circus Maximus, not to the fortifications. The church of S. Anastasia was founded in the sixth century, and although the upper part has been rebuilt in modern times, the crypt of the original church remains, incorporated with part of the substructure of the palaces of the Kings and of the Cæsars, so that there is work of two or three periods, all early. Some of this is of the time of the Kings, part of the time of Julius Cæsar, and parts of the first and second centuries, other parts as late as the sixth, with several changes of construction to carry the works above, causing much confusion of plan. Besides these brick walls there are ancient stone walls, also of two or three periods. Some of them appear of the same rude construction as the other walls of the Kings, blocks of tufa with no cement between the joints^a. The plan of the church above, which is chiefly modern, did not exactly coincide with these, and brick props were built down to the rock to carry the brick arches, which are filled up with the stones of the old wall between the piers.

In several places there are vertical grooves in the concrete walls of these underground chambers as above, looking like hot-air flues; these are the hollows left where wooden posts have decayed, or have been removed, similar to those already described, and there are remains of decayed wood in them.

In part of the substructure there is a paved *via* ten feet wide, and a flight of marble steps up from it to the hill above. This street is made in the old foss on the western side of the hill, or on the bank of the lake in the Vallis Murcia. It is at a very low level, and was also called *Infima nova via*. Facing this street, along the same side of it, is a series of doorways, with a window over each, opening into vaulted chambers, very similar to the shops in the Forum of Trajan, and at Pompeii. Between the arches are small columns, with capitals of early Doric character. This street, with the shops and the

^a These are really old materials taken from a wall of the time of the Kings, but the present construction is modern.

old pavement, is part of the work of Julius Cæsar, who made a street by the side of the Circus Maximus ten feet wide, with shops on the inner side of it against the scarped cliff of the Palatine. The *via* or street is at present vaulted over, but the vault is of comparatively recent date, although not modern.

The rude wall of the Kings, of squared blocks of tufa, may be traced also in a garden on a higher level, a little further along the south-west side of the hill overlooking the Circus, partly concealed by a brick wall of the time of Augustus built up against it. On this side of the hill there are remains of the galleries built by the Cæsars for seats to view the games, as at the Colosseum, and under part of them there are stalls for horses or other animals. On the Aventine side of the Circus no remains of early buildings of stone or brick have been found. The seats for the *plebs* on that side are believed to have been of wood only.

The part that was completed and that remains of the wall of Romulus at the western corner, appears to have been part of the inclosure of the *arx* or citadel of the Palatine when it was a separate fortress. On the south side, other parts of the wall and of towers have been brought to light by the excavations of the French, under the direction of Signor Rosa. On the east side of this quadrangular keep no wall has been found, and perhaps none was ever built.

Every fortified city had its *arx* or citadel, and when the Palatine was originally fortified it was complete in itself. The Tarpeian rock, which afterwards became the Capitol, was not united to it until the union with the Sabines several years after the foundation, and shortly before the death or disappearance of Romulus. Several passages in Livy and Dionysius are rendered clear by this explanation.

“After which, he had made himself master of their city [Coenina^b] at the first assault. From thence he led home his victorious troops; and being not only capable of performing splendid actions, but also fond of displaying those actions to advantage, he marched up in procession to the Capitol, carrying on a frame properly constructed for the purpose the spoils of the enemy’s general, whom he had slain; and there laying them down under an oak, which the shepherds account sacred, he, at the same time, while he offered this present, marked out with his eye the bounds of a temple for Jupiter, to whom he gave a new name, saying, ‘Jupiter Feretrius, in acknowledgment of the victory I have obtained, I, Romulus

^b Coenina was the first city, or rather fortified village, conquered by the Romans. All these cities, conquered one after the other by the Romans, were little more than fortified villages,

as we see by their sites; but the hills on which they stood were about the same size as the Palatine itself. They were, therefore, important conquests to the Romans at that early period.

the king, offer to thee these royal arms, and dedicate a temple to thee on that spot which I have now measured out in my mind, to be a repository for those grand spoils, which, after my example, generals in future times shall offer, on slaying the kings and generals of their enemies.' This was the origin of that temple which was the first consecrated in Rome^c."

The Capitol in this passage does not signify the hill afterwards so called, but that part of the Palatine which had been specially fortified, as the *Arx* or Capitol^d, on which was the royal residence, as usual in all primitive fortifications. The Romans at this period had possession of the Palatine only, and it therefore follows that the sacred oak and the Temple of Jupiter Feretrius^e were on the Palatine, not on the Capitoline Hill.

Again, in the following passage, the reference to the *Arx* or Citadel must be taken to mean the *Arx on the Palatine*.

"The Roman Citadel was commanded by Spurius Tarpeius. His maiden daughter, who had accidentally gone without the fortifications to bring water for the sacred rites, was bribed by Tatius with gold to admit some of his troops into the Citadel^f."

The Romans were obliged to send down to the stream called Argentina for spring-water, and at this stream they met the Sabines coming down from their city on the Hill of Saturn, afterwards the Capitol. This place of meeting gave the king, or chief of the Sabines, the opportunity of seducing the fidelity of the Roman maiden. The citadel into which she admitted them appears to have been the *Arx* with the royal residence on the Palatine, which from various circumstances must have been at the north end of the hill, and the house of Romulus was near the north-west corner, with

^c Livii Hist., lib. i. c. 10.

^d The name of Capitol is said to apply strictly to the small temple which, according to the Etruscan rites, was always placed in the *arx* or citadel, the most secure place in the fortress or town. This temple always contained the images, or paintings of the three tutelar deities—Jupiter, Juno, and Minerva, and the same custom was continued by the Romans in their houses; the *lares*, or private chapel, in the most secure part of the house, contained always images, or paintings, or both, of the three tutelar gods. An instance of this custom may be seen in the *lares* excavated in 1867, within the boundary of the Thermæ of Caracalla, but belonging to an earlier building, believed to have been the private house of the Emperor Hadrian.

^e During the excavations made by the Italian Government on the Palatine Hill in the spring of 1871, considerable remains of the walls of a very ancient temple of the character of the walls of Romulus were brought to light, on the western corner over S. Anastasia, therefore near the spot where the house of Romulus and the sacred oak are known to have stood. From this a grand staircase of the same early character descends in the direction of the Circus Maximus, and seems to have passed under S. Anastasia to the *infima nova via*, before mentioned; the lower part of the steps there is cased with marble, the upper part is of the rude stones of early character not intended to be seen, and was probably cased with wood only.

^f Livii Hist., lib. i. c. 11.

a zigzag road leading up to the gate called Porta Romana from the stream and road below.

“ROMA QUADRATA is said to have been on the Palatine, before the temple of Apollo, where are preserved those things which have the credit of good omen to be used in private, because this place is fortified from the beginning with a stone wall of a square form. Ennius mentions it when he says, ‘and what was the kingdom of Roma Quadrata §.’”

The following passage of Livy is so graphic, and relates so especially to the ground we have been describing, that it seems not out of place to quote it in full.

“The Sabines, however, kept possession of the Citadel [on the Palatine]; but though on the following day the Roman army in order of battle filled the whole plain between the Palatine and the Capitoline hills, yet they did not come down to the level ground; until the Romans, stimulated by rage and eagerness to recover their Citadel, advanced to an assault. The foremost champions of the two parties who led on the troops were Mettius Curtius on the side of the Sabines, and Hostus Hostilius on that of the Romans. The latter, in the front of the army, by his spirit and intrepidity, enabled the Romans to support the fight, in spite of the disadvantage of the ground; but on his falling, the Roman soldiers quickly gave way, and were driven back to *the old gate* of the Palatine. Romulus himself, being forced along by the flying crowd, raised his hands towards heaven, and said, ‘O Jupiter! by the direction of thy auspices, I, here on the Palatine Hill, laid the first foundation of my city. The Sabines are already in possession of our Citadel, which they obtained by fraud, from thence they now make their way hither in arms, and have passed the middle of the valley, but do thou, O father of gods and men! from hence, at least, repel the enemy, remove dismay from the minds of the Romans, and stop their shameful flight. I vow a temple here to thee, Jupiter Stator, as a testimony to posterity of the city being preserved by thy immediate aid.’ Having prayed thus, as if he had perceived that his supplications were heard, he called out,—‘Here Romans, Jupiter, supremely good and great, orders you to halt and renew the fight.’ The Romans, as if they heard a voice from heaven, halted, and Romulus himself flew towards the front. On the side of the Sabines, Mettius Curtius had run down first from the citadel; had driven back the Romans in disorder, through the whole space at present occupied by the Forum, and was now at no great distance from the gate of the Palatine, crying aloud, ‘We have conquered these traitors to hospitality, these cowards in war. They now feel that it is one thing to ravish virgins, and another, far different, to fight with men.’ Whilst he was vaunting in this manner, Romulus attacked him with a band of the most courageous of the youths. Mettius happened at that time to fight on horse-back, and on that account was the more easily repulsed; he soon gave way, and was pursued by the Romans: the rest of the Roman troops also, animated by the bravery of their king, put the Sabines to the rout. Mettius was plunged *into the*

§ “Quadrata Roma locus in Palatio ante Templum Apollinis dicitur, ubi reposita sunt quæ solent boni ominis gratia in urbe condenda adhiberi quia saxo munitus est initio in speciem quadratam. Ejus loci Ennius meminit, cum

ait: quis exstiterit Romæ regnare quadratæ.” (Pompeius Festus, p. 258, ed. Müller.) The temple of Apollo is believed to have stood on the raised platform which remains near the south-west corner of the Arx.

marsh, his horse taking fright at the noise of the pursuers : and this circumstance turned the attention of the Sabines to the danger in which they saw a person of so much consequence to them. However, his friends beckoning and calling to him, he acquired fresh courage from the affection of the multitude, and accomplished his escape. Both parties now renewed the engagement in the plain between the two hills, but the advantage was on the side of the Romans ^h.”

The old gate of the Palatine must evidently, from the context, have been the one on the east side, near where the Arch of Titus now stands. The Romans fought at great disadvantage, the Sabines having possession not only of their own hill behind them, from which they had issued, and to which they could retreat, but of the *arx*, or strongest part of the Roman fortifications of the Palatine, at the corner overlooking the field of battle, and near enough for their arrows to take effect. The Sabines had accordingly passed the middle of the valley, and were near the principal entrance to the Roman city before they were repulsed.

The marsh (*paludem*) into which Mettius and his horse were plunged was the muddy pool into which the streams from the hills ran and were united, before they turned in one stream along the lower ground towards the Tiber. This is still a swampy spot in wet weather, and it is said that no foundation can be obtained there notwithstanding that the ground has been thoroughly well drained. The stream now runs through the Cloaca Maxima, but the swamp is deeper than the drain, turning at this corner, which is close to the round church of S. Theodoro, and must have been in the direct line of the retreat of the Sabines towards the Capitol, after they had advanced half-way along the valley towards the site of the Colosseum, before they were driven back by Romulus. This pool was no doubt the boundary between the Romans on the Palatine and the Sabines on the Capitol at this point.

There has been much discussion about THE GATES of Roma Quadrata, as well as those of subsequent date. Festus says that all cities founded according to the Etruscan rite had necessarily three gates. There are also natural points for three gates into the Palatine itself through the cliffs from the *pomærium*; (a) one on the top of the slopes in the centre of the north-eastern side, (b) another opposite the *clivus* of the Cœlian, near to the south angle, and (c) a third on the western side but near to the north corner, and opposite to the Capitol.

Varro mentions three gates to the Palatine :—

“Mugionis, from the lowing of the cattle in the neighbourhood of the ancient

^h Livii Hist., lib. i. c. 12.

city ; Romanula, from Roma, with steps into the Nova Via at the altar of Pleasure ; the third, Janualis, from Janus, where was placed the statue of Janus, and it was ordered by Pompilius, as recorded in the annals of Piso, that it should always be open—except there should be no warⁱ.”

The PORTA MUGIONIS, or MUGIONIA, led from the Via Sacra into the Palatine, as we learn from Dionysius :—

“They founded temples and dedicated altars to the gods to whom they had prayed in battle : Romulus to Jupiter Stator, because that god had stopped the army in its flight, in consequence of his vow to build a temple to his honour, beside the gate called Mugonia [Muconides], which led to the Palatine from the Via Sacra ; and Tatius to the sun and moon^j,” &c.

From this it appears to have been the gate (*a*) in the middle of the east side of the Palatine, on the top of the *Clivus Sacer*, near the Arch of Titus, where the remains of an ancient gate of the time of the Kings may still be seen. (*c*) This, no doubt, is the “old gate of the Palatine,” referred to in the passage from Livy^k (already quoted at length), and stood in the line of fortification on the eastern side of the city.

The PORTA ROMANA, or ROMANULA. This is the gate that has been excavated by the French under Signor Rosa ; it opens on to the terrace-road under the cliff, before mentioned ; the pavement branches off from the gate going to the west along the northern face of the Palatine, and on the east with steps and a steep descent, turning the corner towards the Forum.

The name of the gate (*b*) to the south opposite to the Cœlian is not mentioned in Varro’s list, nor is the name of it mentioned, as far as has been ascertained, by any other writer, but the road exists, passing under a gateway of the Cæsars still standing, and is still occasionally used in descending from S. Bonaventura.

These were probably the only three roads for horses on the Palatine, but there were steps in other places ; one flight leading down from the top to the site of the Arch of Constantine, where there is still a flight of steps ; another at the north end, at the

ⁱ “Præterea intra muros video portas dici ; in Palatio. *Muggionis*, a mugitu, quod ea pecus in bucita circum antiquom oppidum exigebant. Alteram Romanulam ab Roma dictam, quæ habet gradus in Nova Via ad Volupiae Sacellum. Tertia est Janualis dicta ab Jano ; et ideo ibi positum Jani signum ; et jus institutum a Pompilio, ut scribit in Annalibus Piso, ut sit aperta semper, nisi quom bellum sit nusquam.” (T. Varro, de Ling. Lat., lib. v. c. 34,

s. 164, 165.)

^j Dionys. Ant., ii. 50.

^k “. . . Ut Hostus cecidit, confestim Romana inclinatur acies ; fusaque est ad veterem portam Palatii.” (Livii Hist., lib. i. c. 12). See also Ovid., Trist., b. iii. eleg. 1, v. 31 ; Nonius Marcellus, *De Proprietate Sermonis*, b. xii. c. 51. The authority of Festus is not admitted when he says that this gate was called Mugionia from some one named Mugio, who had been appointed to keep it.

corner next the Forum; and another, towards the west, passing under the church of S. Anastasia. These steps would have to be secured by doors, but they would not be usually called gates, although Plutarch mentions a gate with steps descending to the Circus Maximus. This was probably the flight of steps descending from the ancient temple, and passing under the church of S. Anastasia.

The PORTA JANUALIS, where the Arch of Janus now stands, probably occupies its original site. It was not in the inner line of defence on the cliffs as the three already mentioned, but may have been a way through the Mœnia or outer bank, at one corner. This gate of Janus was on the lowest level, between Roma Quadrata on the Palatine and the Capitol, and was in all probability the point at which the two zigzag roads met^k.

“With this view he built a Janus near the foot of the hill Argiletum, which was to notify a state either of war or peace: when open, it denoted that the State was engaged in war; when shut, that there was peace with all the surrounding nations^l.”

It is stated by Aurelius Victor to have been made in the time of Numa Pompilius^m. Ovid gives an exact description of the situation of this gateⁿ. Although mentioned by Varro as one of the three gates to the Palatine, it does not appear to be directly in the line of the primitive fortifications.

^k Another, Janus Quadrifrons, stood between the Forum Romanum and the Forum of Julius Cæsar, near the senate-house, nearly on the site of the present church of S. Luke, but this was of a much later period.

^l Livii Hist., lib. i. c. 19.

^m Numa Pompilius, B.C. 716, “Pontificem Maximum creavit, portas Jano Gemino ædificavit.” (Aurelius Victor, *de viris illustribus Urbis Roma*, c. iii.)

ⁿ “Cum tot sint Jani, cur stas sacra-

tus in uno,
Hic ubi juncta foris templa duobus
habes?

Inde, velut nunc est, per quem descen-
ditis, inquit,
Arduus in valles et fora clivus erat.
Et jam contigerant portam, Saturniâ
cujus
Demserat oppositas insidiosa seras.”
(Ovidii Fasti, lib. i. v. 257, 266.)

APPENDIX TO BOOK I. SECTION III.

THE Ara Maxima is said to have been near the temple of Hercules Victor; Dionysius distinguishes between the two°. The latter is mentioned by Macrobius^p and Plutarch^q, as near the Porta Trigemina and the Aventine. Dionysius says that the second altar was dedicated by Hercules himself after his victory over Cacus, and was near to the cave. There is every probability that the cave near the Marmorata, called by modern writers the cave of Faunus, is the same as the cave of Cacus; the circumstance that there is a large natural reservoir of water in it supplied by springs, and that it is of great extent, going far back under the hill, makes it admirably suited for the concealment of cattle, and the entrance to it being very narrow, a strong man might very well defend it against almost any number. This gives a certain air of probability to the early legend, and accounts for its having been believed in the time of the Empire. No cave is known at the north end of the Aventine. The short *agger* of Servius Tullius, between the Aventine and the Tiber, passes very near to this, and the Porta Trigemina must have been in that *agger*^r.

Frontinus mentions the Salaria as at the Porta Trigemina^s, and the mouth of the Aqua Appia also is at the Porta Trigemina^t. The medieval arch which now crosses the road, and by the side of which are remains of an old gate, is close to the Salaria or Salt-wharf, which is within the ancient city; and very near to it, on the other side, is the cave reservoir which has been proved to be the mouth of the Aqua Appia.

° Dionys. Halic., i. 39.

^p “Romæ autem Victoris Herculis ædes duæ sunt; una ad portam Trigemina, altera in foro boario.” (Macrobi. Saturnal., lib. iii. c. 6.)

^q “Why, since there are two altars of Hercules, do women never either take or taste any of the things offered up in sacrifice? Is it because after the sacrifice being already performed, the prophetess (*Carmenta*) approaches?” (Plutarch, Quæst. Rom., lix., lx.)

“ . . . near this place (where Hercules found the oxen of the Aborigines of Latium, and killed Cacus the thief) he erected an altar to Jupiter Inventor,

which is in Rome at the Trigemina Gate.”

^r Remains of a tufa wall of that period were found in 1869, in one of my explorations; but as the salt-wharf in which it is situated belongs to the Government, permission could not then be obtained to make any regular excavation. It is in a line with the medieval arch (plastered over) that crosses the present road.

^s “Ad Salinas qui locus est ad Portam Trigemina.” (Frontinus, 5.)

^t “Incipit distribui Appia sub Publicii clivos ad Portam Trigemina qui locus appellatur Salinae.” (Ibid., 6.)

Solinus^u mentions this second altar, and joins the cave of Cacus and the Porta Trigemina together. It is also mentioned by Ovid^v.

This account of the *pomærium* of Romulus is a probable one; it includes that portion of the bank of the Tiber against which the tufa wall called the *Pulchrum Littus* is built, and thus an outwork of the Palatine fortress was provided to keep open the communication with the Tiber, before mentioned as necessary. It is not improbable that in the fortifications of Servius Tullius there were three short *aggers*, or banks, each faced with a wall, and each having a double gate in it, between the cliff of the Aventine and the Tiber. This would be the more necessary, because there was no outer wall with its *pomærium* behind it. On the west side of the Aventine a hard road would naturally be formed on the bank of the river, and when this arrived at the open space at the north end, in which the Forum Boarium was afterwards made, it would be protected by the river on one side, and the swamp on the other; but there was a bank of solid ground as far as the Janus, which has been shewn to have been the entrance to the Palatine fortress on this side.

In the fifteenth century the Temple of Hercules was considered to have been near the Schola Græca, which was on the southern side of the church of S. Maria in Cosmedin^w, and the inscriptions relating to the worship of Hercules Victor are stated to have been found there. A bronze statue of Hercules, and a cup dedicated to him, now preserved with these in the Museum on the Capitol, were also found there. Aldus Manucius, writing in 1592, mentions an inscription found under the Ara Maxima, in the Forum Boarium. The Temple of Hercules Victor was destroyed in the great fire of Nero, and is believed to have been rebuilt by Antoninus Pius, and to be represented on one of his coins. Some of the inscriptions found here are of earlier date than the second century of the Christian era. Prudentius mentions the altar as near the Aventine.

^u “. . . quippe aram Hercules . . . punito Caco patri Inventori dicavit, qui Cacus habitavit locum, cui Salinæ nomen est; ubi Trigemina nunc porta. . . Suo quoque numini idem Hercules instituit aram, quæ maxima apud pontifices habetur . . . sacellum Herculi in foro boario est,” &c. (C. Jul. Solini Collectanea, lib. i. § 7-11.)

^v “Constituitque sibi (Alcides), quæ

Maxima dicitur ara,
Hic ubi pars Urbis de bove nomen
habet.”

(Ovid. Fast., lib. i. v. 581.)

^w “Apud Scholam Græcam ubi erat templum Herculis.” (Cod. Vat. 3616, apud De Rossi.) The manuscript is of the time of Sixtus V., the temple had been destroyed by his predecessor, Sixtus IV.

SECTION IV.

THE CAPITOLINE HILL, OR TARPEIAN ROCK, originally called MONS SATURNIUS, [ADDED A.U.C. c. 33 (?), B.C. c. 720 (?).]

THE hill now called the Capitol was originally a promontory projecting from the high land of the Quirinal, or at least divided from it by a shallow valley. This was afterwards deepened, so that the two hills were divided by a deep foss, through which a road passed. It was again enlarged by Trajan to make his forum, as recorded in the inscription on the base of his column, which marks the height of the hill cut away in this part. On the edge of the Quirinal, immediately on the other side of this great trench, stand the remains of the Torre dei Milizie, and near it the Torre dei Conti, built upon an ancient wall of Etruscan character of the time of the Kings.

The Capitolium Vetus^x is recorded in the Regionary Catalogue as situated in Regio VI., which includes the Quirinal, and it seems not improbable that this was the *Arx* of the Sabines under King Tatius, the present Capitoline Hill being either not then separated, or being a detached fortress, afterwards made into the Capitol of the united people under the general name of Romans.

“Being informed of this disposition of their forces, Tatius, king of the Sabines, . . . before the sun arose, intrenched himself in the plain between the Quirinal and the Capitol^y.”

“In the year of Rome 364, six years after the capture of Veii, Camillus having been driven into exile, Rome itself was taken by the Gauls, with the exception only of the Capitoline Hill, then the *arx* or citadel of the city. Camillus being recalled and made Dictator, causes a young man to be smuggled into the Capitol to give information to the garrison of approaching succour; he contrived to enter by way of the Tiber. The Gauls being informed of this, attacked the *arx*, but were repulsed by Marcus Manlius^z.”

The Tarpeian rock must always have been to a great extent a natural fortress. The material of which it is formed is peperino, or part of peperino and part of hard tufa; in any case it is a hard stone, rough and not easy to work, but very durable, and the natural formation is likely to have been in vertical cliffs, perhaps made more so by scarping in places. The top of the rock is not level, but lower in the centre, and an inclined plane (*clivus*) led up to this part on

^x The Capitolium is also given in the same series in Regio VIII., or Forum Romanum, in which Regio the Capitoline Hill stands.

^y Dionys. Ant., ii. 38.

^z Dionys. Hal. Antiq., lib. xiii. ap. fragmenta, p. 34; Livii Hist., lib. v. c. 47.

the northern side, and then branched off to the two ends. The cliff itself was long considered a sufficient protection, so that no mound or palisade was made on the edge of the rock; of this omission the Gauls took advantage by scaling it with ladders. The name of the Tarpeian Rock was not the original one. It had previously been called the hill of Saturn^a, and the name of Tarpeian Rock was given as a name of infamy to the place of public execution, after the two hills were made one city.

“And the city was difficult of approach, having as an outwork the Capitol, in which a garrison had been placed; and Tarpeius was the commander of it, not the virgin Tarpeia, as some persons state^b.”

“Tarpeia, however, being buried there, the hill was called Tarpeian until king Tarquinius consecrated the place to Jupiter, when her remains were removed, and the name of Tarpeia fell into disuse, with the exception of the rock in the Capitol, from which they used to cast the malefactors, and which they still call by the name^c.”

“This hill was called Tarpeia, from the Vestal Virgin Tarpeia . . . which before was called after Saturne^d.”

In the time of Romulus the Capitoline Hill, as has been said, was in the possession of the Sabines. It was not incorporated with the Palatine as one city until the time of Numa, as we are told by Tacitus^e and Dionysius:—

“The Capitol is believed to have been added to the city not by Romulus but by Titus Tatius, and immediately by their good fortune the *pomærium* was enlarged. Romulus holding the Palatine and the adjoining hill, the Cœlian, but the Capitol and the Quirinal were first occupied by Tatius^f.”

If the Sabines had held only one half the Capitoline Hill they would have had no chance of defending it against Romulus and the Romans on the Palatine, whereas it is evident from the whole narrative that they were at least equally matched, and at first the balance of power was rather in favour of the Sabines. Plutarch seems not to agree with the other historians. He mentions the Capitoline Hill as if it had been an outwork of the city as early as the time of Romulus. It seems more probable that the biographer misunderstood the traditional history, than that the historian should say that it was added to the city of Numa if it had previously been part of it.

The whole rock or hill then became eventually the Capitol^g,

^a “A patre dicta meo quondam Saturnia Roma est :

Hæc illi a cœlo proxima terra fuit.”
(Ovidii Fasti, lib. vi. 30.)

^b Plut. Romulus, c. xvii.

^c Ibid., c. xviii.

^d T. Varro, de Ling. Lat., lib. v. c. 41.

^e Taciti Annales, xii. 24.

^f Dionys. Ant., ii. 50.

^g Livii Hist., lib. i. c. 10; Dionys. Ant., lib. iv.

forming the head of the city, and the strongest part of the fortifications. Its boundaries beyond the foss were, on the north, a level plain on the bank of the Tiber, afterwards the Campus Martius, often flooded and left a swamp; on the east, the valley separating it from the Quirinal Hill; on the west, the Tiber; and on the south, the low ground between it and the Palatine Hill, with the forums or market-places originally made in the wide and deep foss or valley. The *pomærium* or slipe of the Tarpeian fortress extended probably to the original foss of the Palatine on the south, and in the eastern part of this the Forum Romanum was made. Outside of the gate of Janus, at the south-west corner, was also the Forum Boarium, which was level with the street or *via*, and with the bottom of the foss. The lower parts of the columns of the theatre of Marcellus, at the north end of the Forum Olitorium, are now buried considerably by the raising of the old foss-way to the present level of the street.

The foss then turned to the east, along the north side of the rock. Part of the Ghetto, or Jews' quarter, is now built in it, and the Porta Triumphalis of the Cæsars, now the porch of the church of S. Angelo in Pescheria, is built across it. This is usually called the Portico of Octavia, which joined to it; the archway or gate standing between the portico of Octavia and the portico of Philip, as is shewn on one of the fragments of the marble plan. The foss-way then passed through the modern Piazza di Campitelli to the Piazza di S. Marco, and thence turned to the south along the east side of the rock, in what was originally a narrow gorge between the Capitol and the Quirinal, perhaps cut out of the bed of tufa, and afterwards widened to make the Forum of Trajan. The Forum of Julius Cæsar was also made in it, which afterwards united the Forum of Trajan with the Forum Romanum.

The northern part of this ancient mound and foss was made use of in the line of the fortifications of Servius Tullius, and had three gates in it. There was afterwards a second *agger* and foss across the plain to the north of the Capitol, made by Trajan to include his additions to the *pomærium*; it was customary to have a double or triple line of defence to the Keep when the nature of the ground admitted of it, and this level plain to the north would have been a weak point in the defences^h.

The *pomærium* was again extended in this direction, until it ulti-

^h A second foss to the north, of the time of Trajan, has been traced by the line of the *cippi*, or boundary stones, at

the bottom of the foss, one of which remains still *in situ* in a cellar near the Chiesa Nuova.

mately included the whole of the Pincian Hill, on which was originally a detached fort, but it was included by Sylla in his enlargement of the city and the *pomærium*^g.

The surface of the Tarpeian rock was divided into three parts, the two raised parts at the ends already mentioned and the intermontium, on the lower level between them, which slopes down towards the Tiber: in this was afterwards made the Forum Montinarium, now called the Piazza del Campidoglio.

The Palatine and Capitol together formed the heart of the city of Rome, to which the other hills or mounts were added one by one as required by the increase in the number of inhabitants and of their horses, and flocks, and herds.

Of the GATES, the Porta Saturni, mentioned by Livy and Dionysius, was probably the entrance to the Capitol, or Mons Saturni, at the top of the *clivus*, on the northern end. The Porta *Carmentalis* and *Flumentana*, mentioned by several authors, were on the lower level, near the Tiber, but as these belong rather to the line of fortification made by Servius Tullius, they will be spoken of more at length in Section VIII. of this chapter.

^g See the account of the *cippi* of the *pomærium* in the Appendix; one of them was found outside of the Porta del Popolo, or Flaminia, and therefore outside of the line of the Pincian, and this had been restored by Augustus.

SECTION V. THE AVENTINE, [ADDED A.U.C. 30 (?), B.C. 723 (?)].

THE Aventine Hill was protected on its north-western side by the Tiber, with a narrow strip of land between the hill and the river; on the north-east by the lake or marsh, on which the Circus Maximus was afterwards made. On the south and west by the scarped cliffs and a wall.

The south-eastern portion is separated from the main hill by a valley and large foss, and is called the Pseudo-Aventine. On this Pseudo-Aventine^h stand the monastery of S. Sabba to the west and S. Balbina to the east; and these occupy the sites of what were no doubt the southern fortresses, which defended the approaches to the city by the Via Ostiensis, the Via Ardeatina, and the Via Appia.

There are remains of the tufa walls of the Kings on the east and north sides of this part of the Aventine. The west side is a scarped cliff with the wall of Aurelian built up against it. The great foss round these three sides is very visible, and the Porta Ostiensis or S. Paolo, *is made in this foss*. On the south side the earth has been thrown up against the cliff or over it, to make a slope to the sun for the purpose of cultivation, and this line of distinction is nearly obliterated.

The Aventine was taken possession of at a very early period in the history of Rome, but as pasture ground only, and was at first only slightly fortifiedⁱ. It was much covered with wood, and was celebrated for its laurel groves. Dionysius and Pliny^k mention the laurel groves, and that it was called *Loretum* or *Lauretum*.

“First he [Ancus Martius] added considerably to the extent of the city by enclosing within the walls what is called the Aventine. This is a hill of moderate height full eighteen stadia in circuit, which then was covered with every kind of wood, the most numerous and beautiful being the laurel,—for which reason a certain part of it is called Lauretum by the Romans, but now it is quite full of houses. There, along with many others, a temple of Diana is erected^l.”

Aulus Gellius speaks of it as without the *pomærium*, even down to his own time. It is evident that the original meaning of this

^h This name is said to have been given by Nibby to that part of the Aventine Hill which is detached from the rest by the wide and deep *via-fossa*, through which runs the Via di Porta S. Paolo. It is the name now com-

monly used, and is convenient.

ⁱ Numitor's oxen were stationed on the Aventine Hill. (Dionys. Halic., Ant., lib. ii. c. 79, 84.)

^k Plin., Hist. Nat., lib. xv. cap. 40.

^l Dionys. Halic., Ant., lib. iii. c. 44.

word, as part of the fortifications of the Kings, had been lost sight of in the time of the Empire.

“It has been asked, and is still asked, why the Aventine alone, out of the seven hills of the city, should be without the *pomœrium*, while the other six are within it, considering it is neither far off, nor thinly inhabited : for neither Servius Tullius nor Sylla, who had obtained the right of advancing the line of the *pomœrium*, nor even afterwards did the divine Julius, when he could have advanced the *pomœrium*, include it within the prescribed bounds of THE CITY^m.”

Livy says that it was inhabited by the Latins after the capture of their city by Ancus Martius, B.C. 630ⁿ; and Dionysius refers to the same. The fortifications were probably made by these Latins, and the remains of walls against the cliffs may very well be of that period, and it was certainly included within the *circuit of the walls* of the city in the time of Servius Tullius for strategical reasons, who always made use of the walls already existing as far as they came in the same line to enclose THE CITY.

Beginning then at the Tiber, near the Sublician bridge, the edge of the hill was strongly fortified with a wall against the cliff, of which there are remains overhanging the Tiber under the monastery of S. Sabina, and accessible from the gardens of that establishment^o. There are other remains of the same wall against the cliff further on to the south, near the corner where the cliff turns round to the east. Near the Porta Ostiense, or Ostiensis, in the vineyard of the Jesuits of the Collegio Romano, now of Prince Torlonia, a considerable part of this wall has been excavated. All these walls on the Aven-

^m “Propterea quæsitum est, ac nunc etiam in quæstione est, quam ob causam ex septem urbis montibus, cum ceteri sex intra pomœrium sint, Aventinus solum, quæ pars non longinqua nec infrequens est, extra pomœrium sit : neque id Ser. Tullius rex, neque Sulla, qui proferundi pomœrii titulum quæsit, neque postea Divus Julius, cum pomœrium proferret, intra effatos urbis fines incluserint.” (Aulus Gellius, lib. xiii. c. 14.)

“Sed de Aventino monte prætermittendum non putavi, quod non pridem ego in Elidis, grammatici veteris, commentario offendi : in quo scriptum erat Aventinum antea, sicuti diximus, extra pomœrium exclusum, post auctore Divo Claudio receptum, et intra pomœrii fines observatum.” (Ibid.)

This passage may bear two interpretations, either that this hill was so slightly fortified in the first instance that no outer *agger* and foss was made

round it until the time of Claudius, about which time the fortifications were evidently extended and strengthened, or only that the Augural rites had not been performed, and therefore it was not in a technical sense included within the boundary of the *city*, although for defence the walls of the city encompassed it.

ⁿ Livii Hist., i. 33.

^o See a paper on this subject by Cardinal Wiseman in the Transactions of the Royal Society of Literature for 1856, and an article in the “Dublin Review,” 1857. The portion of the wall there described may still be seen, and has since been further excavated.

S. Sabina is on the highest part of the Aventine, and Mr. Burn states that there is a bed of travertine on this part *above* the tufa, of which the rest of the hill is composed. In the cave under this there is a level bed of white clay, which seems to lie *under* the tufa.

tine are rather different from the one in the *agger* of Servius Tullius on the Esquiline, and may have been the work of the Latins in the time of Ancus Martius, as said before.

This Wall of the Kings is built of blocks of yellow tufa from the Coelian, rudely hewn out of the rock, and squared with the hatchet ; the blocks are fitted closely together, in some parts mortar is used, in other parts none, in the facing. There are several yards of this wall, which is twelve feet thick and fifty feet high, built against the cliff. The wall has been extensively repaired in the time of Camillus, and there is an arch of his time, and part of a second, of sawn stone inserted into the old wall, for what purpose is not clear ^p.

Descending into the valley from near this point, and following the line of the hill further to the south, an *agger* was carried by Servius Tullius across the hollow, from below S. Prisca to below S. Sabba ; a portion of the ancient foss belonging to the *agger* remains open at the point where it is intercepted by the road from the Porta Ostiense. This has a medieval pavement, having been retained at that point to give access to a stone quarry ; it is like the dry bed of a canal with vertical cliffs, and the pavement is twenty feet below the level of the modern road by the side of it. In the vineyard of S. Sabba, the old paved road has been found at a considerable depth, that is, at the bottom of the foss ; and the *agger* on the brow of the hill can be distinctly seen in this vineyard, extending nearly to S. Balbina, which is another fortified monastery on the line of the old fortifications already mentioned, with the *pomærium* on the slope, and the foss at the bottom of it, though this has been afterwards partially obliterated by a corner of the Thermæ of Caracalla. The valley grows gradually narrower as it approaches the point where an *agger* and a foss were carried across the short space, connecting the fortifications of the Aventine on the west with those of the Coelian on the east. In this *agger* the Porta Capena was made, which for a long period was the chief entrance to the city of Rome on the southern side. The fortifications all along the cliff of the hill, on the line of the river, have been rebuilt in the Middle Ages, but upon the old foundations, which may be seen below them in many places, and the tufa wall against the face of the cliff has to a great extent been covered over and concealed by brick walls of the time of the Empire.

^p Further excavations were made here in 1870, and behind the arches which are *inserted* in the face of the tufa wall, is a mass of concrete wall, so that in this part the facing only is of the large blocks of tufa. It is conjectured by

Visconti (apparently with reason) that a balista or catapult was placed behind these arches, which served as *embrasures* through which the stones were thrown. (See Regio XII.)

SECTION VI. THE CÆLIAN, ADDED A.U.C. 147, B.C. c. 650.

THE Cœlian^r is said by Terentius Varro to have been named after Cœlius Vibenna, a Tuscan leader, who with his band supported Romulus against the King of Latium, and was with his followers located on the Cœlian as a reward.

“In a part of the Suburan district the chief hill is the Cœlian, [so called] from Cœlius Vibenna, a noble Tuscan general, who is said to have given aid with his army to Romulus against the Latin King ; hence, after the death of Cœlius, because these Tuscans held too strong a position, and were not without suspicion, they were removed to the lower ground, and the street was called from them Vicus Tuscus^s.”

“From a leader who came from Etruria, and whose name was Cœlius ; the hill on which he settled is called the Cœlian to this day^t.”

This hill is said by Livy and some writers to have been added to the city by Tullus Hostilius, who resided on it himself to encourage others to do so, B.C. 650 ; by Strabo and other writers the addition is attributed to Ancus Marcius.

“Meanwhile, from the destruction of Alba, Rome received a considerable augmentation, the number of citizens was doubled, the Cœlian mount was added to the city ; and in order to induce others to fix their habitations there, Tullus chose that situation for his palace, where, from thenceforth, he resided^u.”

“And that none might be without a place to dwell in, he included within the fortifications of the city the Cœlian hill^x.”

“Ancus Marcius, when he took in the Cœlian hill and the Aventine, separated as they were from each other, and from the other fortifications of the city, acted from necessity in adding them. For neither was it expedient to leave such strong hills without the wall to serve as positions for attacking the city to any that wished it, nor was he able to complete the whole wall as far as the Quirinal^y.”

The name of the Cœlian Hill is applied sometimes to the ground extending eastward as far as the wall of the Empire, and is made to include both the Lateran and the Sessorium. The Lateran is, however, separated from it by a valley and a foss, which has most probably been cut at some very early period. It was not included in the Wall of the Kings, but was a detached fortress by the side of the city. There is another distinct foss between the high ground of the Lateran and that of the Sessorium, but across it there is an *agger* or bank

^r The ancient name of the hill was Querqual, from its being covered with oaks, as that of the Aventine was Murcus, from its having been covered with myrtles.

^s “In Suburanæ regionis parte princeps est Cœlius mons, a Cœlio Vibenzo Tusco duce nobili, qui cum sua manu dicitur Romulo venisse auxilio contra

Tatium regem : hinc post Cœlii mortem, quod nimis munita loca tenerent neque sine suspitione essent, deducti dicuntur in planum. Ab eis dictus vicus *Tuscus*.” (Terentius Varro, lib. v. § 46.)

^t Dionys., lib. ii. c. 36.

^u Livii Hist., lib. i. c. 30.

^x Dionys., lib. iii. c. 1.

^y Strabonis Geogr., iii. 7.

which connects the two, and this is partly natural, partly artificial. The part near the Lateran may be natural, but the continuation of this is evidently made by the hand of man, having vertical cliffs, and a very distinct foss on each side of it. Whether intended for fortification or for carrying the aqueducts, it was certainly made at an early period. There is again another and similar *agger* across the foss between the Lateran and the Quattro Santi, and these *aggeres* make the Lateran appear part of the Cœlian.

The Cœlian has evidently been scarped at a very early period; the vertical cliffs on all sides are distinctly seen. The terraces built against this cliff by Claudius, in that part where the Claudium was situated, have been nearly all destroyed, and the outline of the cliff is therefore brought into view. We see by a fragment of the marble plan that there was a circus in the narrow gorge on the east side of the Claudium, along which the Via di S. Stefano Rotondo passes from the valley to the Navicella and the Arch of Dolabella; this road has been much raised to make a more convenient access for carriages on four wheels to the top of the hill, and thus the ancient foss is partially filled up.

From the church of S. Gregory, proceeding first southward and then eastward, the scarped cliff formed the fortifications of the Kings; this line of *enceinte* may be traced under the Villa Mattei to the present road, which runs down to the Porta Metronia at the angle of the wall of the Empire. Just to the north of the church of S. Gregory, the monks, in 1870, threw open a fine piece of the old tufa wall against the cliff, which had long been concealed by a modern wall and a small court filled with rubbish. This ancient wall is in part of the usual large tufa blocks, but a considerable part has been rebuilt of concrete, faced with the tufa wall only. The scarped cliffs round three sides of the Villa Mattei, the site of an ancient fortress, are very distinct, supported by walls of different periods. The Navicella and the Arch of Dolabella stand upon a small piece of level ground in the centre of that part of the hill with the cliffs coming up the two gorges or clefts, close to these on each side. Further on towards the east, on the south side, houses of the time of Sylla and of the early Empire are built up against the scarped cliff, and on a higher level there is a terrace with another cliff supported by a wall. The cliff is here less precipitous, and it would appear as if they had depended from early times upon the outer wall, which, although mainly the work of Aurelian, is built upon work of the Kings, and has in it remains of the tufa wall. It was also defended by a branch of the small river Almo, in the bed

of which the mill-stream supplied by water from the Aqua Crabra and the Marrana now runs. At the east end, opposite the Lateran, the cliff is also supported by a wall on the side of the valley and great foss, which has a tomb of the first century on each side of it. On the north side the Santi Quattro stands in a square fortress, with steep cliffs on three sides, joined on to the main hill on the south side only, with a small foss there also.

The *pomærium*, or slopes round the Cœlian, were bounded on the north-west by the Via di S. Gregorio; on the north by a marsh, the site of which was afterwards occupied by the Colosseum, and by the road or street now called the Via Labicana; on the east by the Lateran, which was a separate fortress; on the south by the outer *mœnia*, on which the Wall of Aurelian is built; and by the Via Appia on the south-west. The line of the outer *agger*, between the Porta Metronia and the Via Appia, probably followed the course of the stream. The Via Metronia, now called Via della Navicella, is carried in a *clivus*, or cleft, and road up the hill to the Arch of Dolabella, where it meets two other roads coming up clefts, the Via di S. Stefano, as before mentioned^z, and the Clivus Scauri.

THE CÆLIOLUS.

There is some doubt as to the situation of the CÆLIOLUS, some antiquaries^a consider it to be the fortified promontory on which the Quattro Santi Coronati stands; this is a very strong position, there being a wide and deep foss or valley round three sides of it, and the fourth separated from the main hill by a foss only.

The Cœliolus is thus referred to by Varro:—

“But those of the inhabitants of the Cœlian who were free from suspicion were transferred to the place called Cœliolus, which joins on to the Cœlian^b.”

Mr. Burn^c considers it to be the eastern half of what is usually

^z Besides these clefts on the north, south, and west, there is another on the south-west, opposite to S. Balbina, with an ancient road in it leading also to the central point at the Arch of Dolabella; this is now in the grounds of the Villa Mattei.

^a Others consider that the Cœliolus was a detached small hill to the south-west of the Cœlian in Regio I., called *Monte d'Oro*, on which the Porta Latina stands, and where the wall of the Empire is built against a scarped cliff. This is a lofty hill on a level with the Lateran, and has been a hill-fortress always separated from the Cœlian by a valley, in

which the brook runs between them; and as Varro says that the Cœliolus was *joined to* the Cœlian, this separate hill can hardly be the one so called. The evidence, however, is so imperfect, that there is no reason why the hill of the Lateran itself should not have been the Cœliolus.

^b “De Cœlianis qui a suspicione liberi essent, traductos in eum locum, qui vocatur Cœliolus; cum Cœlio nunc conjunctum.” (T. Varro, lib. v. c. 8.)

^c “Rome and the Campagna,” by Robert Burn. Cambridge, 1871, 4to., p. 220.

called the Cœlian Hill, or all that portion which lies to the east of the Navicella and the Arch of Dolabella, with the gorges on that side of the Claudium, and the ancient fortress on which the Villa Mattei stands. This western half of the Cœlian certainly appears to have been separated from the eastern part by a great foss in the original fortifications, but there is every reason to believe that the whole of the Cœlian as far as the valley and foss, between the east end of it and the Lateran, was included in the city of Servius Tullius. Others consider the Cœliolus as the hill now occupied by the Lateran and the Sessorium, or Sante Croce. The latter is again separated from the Lateran fortress by a distinct foss, but the two may be considered as occupying one hill, outside of THE CITY.

The road from Sante Croce to the Porta Maggiore is carried upon an *agger* supported on the western side by a wall of the time of Constantine, built no doubt when his mother, S. Helena, lived in that fortified palace called the Sessorium, to which the Amphitheatrum Castrense and the Circus Varianus were appendages. This is separated from the bank on which the Villa Volkonski now stands by a very decided and large foss or valley. The site of that villa and of the one now called the Villa Massimo have been another fortress at some early period; a portion of the foss that separated that from the Lateran has been filled up in part since 1866. But it may have been originally all one fortress to protect this side of the city, and subdivided afterwards.

SECTION VII.

THE QUIRINAL, VIMINAL, AND ESQUILINE [ADDED B.C. *c.* 600],
AND COMPLETION OF THE WALL OF ENCEINTE BY SERVIUS TULLIUS.

THE Quirinal^d, the Viminal, and the Esquiline Hills were called *colles*, as distinct from the *montes*. They are in fact promontories from a larger hill to the east, which has no distinct name, and the ascent to which from the back is easy and gradual, so that it could not be fortified strongly without a great effort, which was not made until the *agger* of Tarquinius Priscus and Servius Tullius was formed across this easy, sloping ground at the back of these three hills.

As Servius Tullius succeeded Tarquinius Priscus, there is little doubt that the plan of fortifying the city begun by the latter was completed by the former; but it should be observed that the *agger* usually called by the name of Servius Tullius does not protect the Esquiline. The northern part of it protects the Quirinal and the southern part the Viminal, but it ends at the north-east corner of the Esquiline. The cliffs of the Esquiline then carry on the inner line of defence to the Lateran, or at least to the gate between the Esquiline and the Cœlian close to the Lateran.

Livy's account is very exact, as he distinguishes between the two hills *added to* the City, and the third enlarged only. He says,—

“For that multitude it was seen to be necessary to enlarge THE CITY. He [Servius Tullius] added two hills, the Quirinal and the Viminal. He next enlarged [*auget*] the Esquiline, and there, to give dignity to the place, he dwelt himself^e.”

^d “*Secundæ Regionis Exquilie*. Alii has scripsere ab excubiis Regis dictas: alii ab eo quod excultæ a rege Tullio essent: alii ab æsculetis, Huic origini magis concinunt loca vicini, quod ibi locus dictus *Facutalis* et *Larum* et *Querquetulanum* sacellum et *Lucus Mefitis* et *Junonis Lucinæ*: quorum angustæ fines: non mirum, jamdiu enim late avaritia nunc est. Exquilie duo montes habiti, quod *Oppius*, quod pars *Cespeus* mons suo antiquo nomine etiam nunc in sacris appellatur. In sacris Argeorum scriptum est sic:

“OPPIUS MONS, PRINCEPS EXQUILIS OVIS LOCUM FACUTALEM; SINISTRA VIA SECUNDUM MÆRUM EST.

“OPPIUS MONS, TERTICEPS CIS LU-

CUM EXQUILINUM, DEXTERIOR VIA IN TABERNOLA EST.

“OPPIUS MONS, QUARTICEPS CIS LUCUM EXQUILINUM, VIA DEXTERIOREM IN FIGULINIS EST.

“CEPSIUS MONS, QUINTICEPS CIS LUCUM POETELIUM . . . EXQUILINUS EST.

“CESPIUS MONS, SEXTICEPS APUD ÆDEM JUNONIS LUCINÆ, UBI ÆDITUMUS HABERE SOLET.” (T. Varro, lib. v. 8, §§ 49, 50.)

^e “Ad eam multitudinem urbe quoque amplificanda visa est. Addit duos colles Quirinalem Viminalemque. Inde deinceps auget Esquilias: ibique ipse, ut loco dignitas fieret, habitat.” (Livii Hist., lib. i. c. 44.)

Other writers refer thus to the addition of the hill region.

“[Numa] harmonizing the whole people like a musical instrument, his sole aim being the public weal, and increasing the circuit of the city by the Quirinal Hill, for as yet it was unfortified ^f.”

“He [Tarquinius] added to the city two hills, that called the Viminal and the Esquinal, of which each is equal in extent to a considerable city, and divided them among the Romans who were without habitations, to build [thereon] houses for themselves; and he himself fixed his abode on the strongest point of the Esquilæ. . . .

“This was the last king that increased the circuit of the city, by adding two hills to the five, after taking the auspices, as the custom was, and performing all the other rites of religion ^g.”

“Servius perceived this defect, and added the Viminal and Quirinal hills. As they were both easy of access from without, a deep trench was dug outside them ^h,” &c.

These hills were originally the natural pasture-ground of the Sabines, having the Mons Saturnia for their capital, which afterwards became that of the united people, and was called the Capitol after they were united with the Romans.

The Quirinal was sometimes called Agonalis. *Agon* is said to signify ‘a mount or small hill’ in the language of the Sabines. The Quirinal is a series of such mounts; in the time of Servius Tullius it was called Regio Collina, and it is still called the “Rione dei Monti,” or the mountainous region of the city. Quirinus, as is known, was the surname of Romulus, by which he was deified, and a temple is said to have been erected to his honour by Numa upon this hill ⁱ.

There are six rather prominent mounds upon it which were called Quirinales, on three of which the temples Salutaris, Mucialis, and Quitiaris were situated. There is little doubt that these prominent points were all fortified, although the fortifications ^k may have been earthworks and wooden towers only.

Numa Pompilius is said to have resided on the Quirinal, and no doubt his palace was fortified with earthworks. It is most probable

^f Dionys. Hal., lib. ii. c. 62.

^g Ibid., lib. iv. c. 13.

^h Strabo. Geogr., lib. v. c. 3, § 7.

ⁱ Plut. Romulus, c. 29.

“Thura ferant, placentque novum pia
turba Quirinum;

Et patrias artes militiamque colant.

Jussit: et in tenues oculis evanuit auras.

Convocat hic populos, jussaque verba
refert.

Templa Deo fiunt: collis quoque dictus
ab illo:

Et referunt certi sacra paterna dies.”
(Ovid. Fasti, lib. ii. v. 507.)

^k It is probable also that each of these ancient fortifications was taken possession of afterwards by the Barons or Brigands of the Middle Ages, who commonly built their castles upon or within ancient earthworks, more especially if the situation would command a foss or narrow valley. Several of their towers remain.

that the temple of Quirinus was within its walls, as in early times a temple was usually built in a place of security within the walls of a fortress of some kind¹.

The history of the Collis Viminalis and Collis Esquilinus is comprised in what has been said of the Collis Quirinalis. They were all three called *colles*, and not *montes*, because they were not so much distinct mounts as connected promontories. But they formed part of the seven hills of Rome in the time of Servius Tullius, which did not include either the Pincian or the Janiculum^m.

The Viminal has scarped cliffs, which may be distinctly seen at intervals. On the north side, opposite to the church of S. Vitale, the cliff is supported for some distance by a wall of the Kings, of the usual character, of large blocks of tufa split, not sawn, and built without mortar, but of later character than that on the Palatine; against this a wall of a house of the time of the Republic has been built. In front of this again, lower down on the slope, a building of the early Empire of some importance has been erected, of which there are considerable remains, called the Lavacrum of Agrippina, from an inscription found there, and agreeing with that date; there are few places where the three periods can be seen so distinctly marked. On the south side the house of the Pudens family is built against the cliff, and conceals it. At the west end the cliff may be seen behind the houses in the Suburra, the back windows of which often look right against the rock and the wall supporting it. The Esquiline also has scarped cliffs, which can still be seen in many placesⁿ.

The great *agger* of Servius Tullius is the *vallum* or bank or earth-work which extends for about a mile, to protect this north-eastern part of the city of the Kings in a part where the slope of the ground was so gradual that it could not be scarped, or cut into vertical cliffs in the same manner as the other hills. This *agger* was cut through obliquely in making the railway into Rome, and remains of the Porta Viminalis were found. In the summer of 1864, in adding a new siding just within the station on the north side, the workmen came

¹ The Torre dei Conti, on the south-west corner of the Quirinal, is built upon an early tufa wall connected with other tufa walls. Can this have been the *Capitolium Vetus*, and the residence of Numa?

^m Although the number of the Seven Hills, in the first instance, was made up by considering the Quirinal, Viminal, and Esquiline as three hills; when the city was enlarged, and the Pincian and Janiculum were included, the number

seven was retained by considering the three as one hill. Thus we have in the Supplementary of the *Curiosum Urbis* and *Notitia*:—"MONTES VII. Mons Cœlius, Aventinus, Exquilinus, Janiculensis, Palatinus, Tarpeius, Vaticanus."

ⁿ The most important part of the ancient scarped cliffs of this hill, the point where the south end of the *agger* joins on to them, has long been enclosed in the garden of a nunnery, and therefore inaccessible.

upon more of the wall built of large squared stones, very well constructed, with fine joints without lime mortar, but the stones were held together by iron clamps. This was at once seen to be a part of the wall of Servius Tullius, and it was ordered to be carefully uncovered and not disturbed, and that every stone should be numbered at once, in a conspicuous manner, as it was uncovered, so that it might be seen at once if any of them were removed. Subsequently this portion has been removed to enlarge the station, in 1870 and 1871. This excavation exposed to view the facing of a stone wall against the outer face of a great bank of earth, to support this earth and give strength to the whole construction, built of large squared stones. Some authorities say that another common mode of construction adopted by the ancient Romans in walling their cities, was to have a *spina* or stone wall, in the middle of the bank or *vallum*; while others say that there were frequently two parallel walls filled with earth between them, and covered with earth on the outside also °.

The accounts of this great *agger* in ancient authors are unusually clear and distinct. We have already had occasion to mention the light thrown upon the history of primitive fortifications, and with them on that of architecture, and of the construction of walls, by the history of the Jews, the earliest history we possess. The following additional extract is interesting and useful, as giving the measurement of the stones used in building the wall of Ecbatane in Media; these walls still exist, and it is probable that we shall soon have photographs of them. Such walls, closely resembling the walls of the Kings in Rome, can hardly be destroyed altogether; some of the upper stones may be removed and used as foundations for other buildings, but it is only in very recent times that such massive stones, and the paving-stones of the time of the early Empire, have been broken up for macadam stones to make the roads with.

“In the twelfth year of the reign of Nabuchodonosor, who reigned in Nineve, the great city; in the days of Arphaxad, which reigned over the Medes in Ecbatane, and built in Ecbatane walls round about [the city] of stones, hewn three cubits broad and six cubits long [2 ft. 3 in. wide, and 4 ft. 6 in. long], and made the height of the wall seventy cubits, and the breadth thereof fifty cubits [52 ft. 6 in. high, and 37 ft. 6 in. thick]: and set the towers thereof upon the [sides of the] gates of it, an hundred cubits high [75 ft.], and the breadth thereof in the foundations threescore cubits [45 ft.]: and he made the gates thereof, even gates that were

° See “Military Architecture,” by Viollet-le-Duc, p. 9. (Oxford, 1860.) The vallum on which the aqueduct of Nero stands, near the Porta Maggiore, appears to be of the latter character; two walls are visible where the bank is cut through by the road made by Sixtus V. from S. Croce.

raised [portcullis ?] to the height of seventy cubits [52 ft. 6 in.], and the breadth of them was forty cubits [30 ft.], for the going forth of his mighty armies, and for the setting in array of his footmen^p.”

The whole of this description might very well apply to the *agger* and wall of Servius Tullius, and for the array of the footmen, it is obvious that a level space would be required outside of the gate, or in the *pomærium*. It should be observed that Pliny mentions the *agger* of Tarquinius Superbus as a wonderful work ; perhaps by this he means the outer *agger*, with the fortresses at each end, one of which became the Prætorian Camp, the other the Sessorium. He had just before mentioned the houses extending to the *Prætorian Camps* in the plural, and the great extent of the city as the largest in the world, whereas the city of Servius Tullius was only of the same size as Athens, and Pliny must have been well aware of this. The seventy thousand paces which he reckons could not be contained within the boundary of the old CITY, neither does the *agger* of Servius Tullius enclose the whole of the eastern side as he mentions. It does not enclose the Esquiline, but joins on to the north-east angle of its cliffs. The outer *agger* does enclose the whole eastern side of Rome, although there is reason to believe that it was left unfinished at the north end, in consequence of the great rebellion, as has been said.

Pliny says :—

“Rome was enclosed on the east side, where it was for the most part of easy access, by the *agger* of Tarquinius Superbus, which was among the greatest wonders of the world, for it was of equal height with the walls ; the rest of these fortifications being supported with high walls or steep hills or cliffs (*abruptis montibus*).”

Other authors write as follows. Livy says :—

“He [Tarquinius] surrounded the city with trenches [*fossæ*], an *agger*, and a wall, and pushed forward the *pomærium*^q.”

“And the walls of the city, which had been constructed in haste and were faulty in their workmanship, he, [Tarquinius,] resolved to rebuild with stones, each a load for a cart, and squared by the rule^r.”

“But one spot, which is the most assailable of the city, extending from the Esquiline to the Colline gates, is rendered strong by art. For a ditch has been dug before it, more than a hundred feet wide where narrowest, and thirty feet deep. And a wall rises above the ditch continuous with a mound, so high and broad as not to be shaken down by battering-rams, or overturned by undermining the foundations. This place is about seven stadia in length and fifty feet in breadth^s.”

“The Romans then, having mustered and armed their forces, stationed themselves on the *enceinte* of the city, which was at that time of about the same extent as

^p Judith i. 1—4.

(Livii Hist., lib. i. c. 44.)

^q “Aggere et fossis et muro circumdat urbem. Ita pomærium profert.”

^r Dionys. Hal., lib. iii. p. 200.

^s Ibid., lib. ix. p. 624.

the ASTY of the Athenians[†]. On one side it depended on the hills and the scarped cliffs; on another side it was defended by the river Tiber. . . . Another part of the city, which was more easy of access from the Porta Esquilina to the Porta Collina, has been made strong by art. In the first place a foss has been excavated of such large dimensions, that it is, *at the least*, one hundred feet wide, and its depth thirty feet; a wall is then built against this foss, and a high and large bank, which can neither be shaken by battering-rams, nor can the foundations be undermined. This part is in length about seven *stadia* [about a mile], and in breadth fifty feet. Upon this, then, the Romans were placed ready to receive the assault of their enemies, who could neither form the *testudo* [with their shields] nor pass the *fossæ* with the machines called elephants^u.”

And Strabo:—

“Servius disapproved of the omission; for he supplied it by adding the Esquinal Hill and the Viminal. But as these are easy of approach from without, they dug a deep ditch, and threw up the earth on the inner side, and this *agger* on the inner brow of the ditch they continued for a distance of six *stadia* [three-quarters of a mile], and raised upon it a wall and towers from the Porta Collina as far as the Porta Esquilina. About the middle of the *agger* is a third gate, of the same name as the Viminal Hill^x.”

There is a somewhat difficult passage in Terentius Varro, which has been supposed to have reference to this wall, in which both stone and earth are mixed. He seems, however, to be speaking only of the etymology of the words, and not of the construction of the walls.

“They called [certain] towns *tuta*, because they fortified them with [earth]work, so that it should more resemble a wall. The earth which they threw out into a heap they called *aggers*, and what was contained (?) in the *agger* [they called] a wall. That which was brought for the purpose of fortifying they called *munus*, by which they enclosed the city, from which [word] ‘munus’ [comes] *murus*^y.”

There is also a passage from Dionysius which applies to the outer *agger*, and not to the inner one:—

“That part of the *enceinte* of Rome, by which you go to Gabii, was fortified by him [Tarquinius]. A large number of people were employed in making an *agger*, excavating a great foss, and raising the wall higher, and occupying the place with thicker towers, because in this part the city appeared less strong, whereas in all the rest of the circuit it was very secure and of difficult access^z.”

[†] It will be observed that the ASTY of the Athenians included only the city proper, and not the long wall to the Piræus; and in the same manner the city of Rome did not include the long wall or covered way which connected it with the Janiculum.

^u Dionys. Halic., Ant., lib. ix. c. 68.

^x Strabo, Geogr., lib. v. c. 111, § 7. From this passage it is evident that the Porta Esquilina was at the north end of the hill, not at the south, as it is usually placed.

^y “. . . Tuta oppida quod operis muniebant, mœnia dicta. Quo mœnitius esset quod exaggerabant aggeres dicti. Et qui aggerem contineret mœnus, quod [mœniendi] causa portabatur mœnus, quo sepiebant oppidum, e quo mœnere mœrus.” (T. Varro, de Ling. Lat., lib. v. c. 32, § 141.) The passage admits of several versions. The English given above is as literal as possible, but the passage is so corrupt that the meaning can only be guessed at.

^z Dionys. Hal., Ant., lib. iv. c. 54.

This passage is usually interpreted to apply to the *agger* of Servius Tullius, but the road to Gabii was by the Porta Esquilina and through the Porta Prænestina or Labicana, a mile away from that *agger*. As observed before, the great *agger* of Servius Tullius ceases by its junction with the cliffs of the Esquiline Hill. But across the valley which runs between the Esquiline and Cœlian, and along which the Via Labicana passes, there must have been a bank of some kind and a gate. The remains of a fortress, which seems to have been originally a sort of horn-work of the time of the Kings to defend the entrance to the valley, is at the south-east corner of the Esquiline, and very distinct; the wall on one side is supported by a series of niches ^a, or arched recesses, as usual. This semi-detached fort appears to have been to protect the gate between the Esquiline and the Cœlian, which was placed in the *agger* across this valley.

To complete the line of fortifications round THE CITY of this period, the north side must also be described. The inner *agger* extends northward nearly to the Circus of Sallust, where the fortification turns short round to the west, following a cliff, with a wide and deep foss in front of it, in which the Circus of Sallust was made. At this corner there was a horn-work to protect the Porta Collina; the ancient part of the road now called the Via di Porta Pia, passes through this *agger* at a low level, with banks on each side supported by walls. Near the west end of the Circus the cliff makes a sharp angle to the south for a short distance, on which point a villa has been built ^b; under this the large stones of the Wall of the Kings can also be seen against the cliff, behind the shrubs. The line of the cliffs then turns again to the west, following the course of the Quirinal Hill, with the same wide and deep foss between the cliff and the Pincian, with the outer wall upon it. The cliff has everywhere been faced with a wall of the Kings, and this wall has in most parts been rebuilt or refaced in the time of the early Empire, and often again at later periods, to support new buildings on the upper level. Here a piece of the old wall of the time of the Kings can be seen through a hole in the back of the brick arcade which is built up against it.

^a It is however possible that the great Golden House of Nero, and that the *porticus* a mile long, may have meant an *arcade*, which is one meaning of the word. There are remains of an arcade against the western cliff of the Esquiline in many places. The distance from the vestibule on the Palatine is just a mile. These niches may have been used for a series of shops, or may have been used for the *tabernæ*, or

taverns. They are now made use of for a *cabaret*, or wine-shop, and afford a convenient shady retreat for taking a luncheon in the heat of the day when visiting the Lateran, which is close at hand, or S. Maria Maggiore, which is not far distant, this corner of the Esquiline being situated in the street which leads from one to the other, called the Via in Merulana.

^b Now the villa of Mr. Spithoever.

The wall and cliff then pass to the south of the Circus, which was made in the foss, and then to the north of the pontifical palace on the Quirinal; here it makes another angle, and turns to the south, passing by the ruins of the Thermæ of Constantine near the modern Piazza de Monte Cavallo. Thence the line of fortification was continued across the short valley or foss to the eastern side of the Capitol, thus joining together the defences of the Quirinal with those of the Capitol. From the western side of that rock the fortification was no doubt extended to the Tiber. In this part of the city it is difficult to realize the exact line of the ancient *fossæ*, and yet it is very apparent they have had some influence on the confused plan of the streets and buildings of this part of Rome.

A portion of a wall of the Kings is still visible under the cliff of the Quirinal in the gardens of the Colonna Palace behind the Piazza dei Apostoli, and therefore on the eastern side of the Via Lata, as the Church of the Apostles is described in Anastasius as in Via Lata. This part of the wall has served as a substructure for the Thermæ of Constantine. Another portion of the wall round the foot of the Quirinal Hill is the one afterwards used as an enclosure on that side for the Forum of Augustus. In that part there are no cliffs, the road up the hill is very steep, but there was no vertical cliff; in other parts the cliffs remain, with or without walls built up against them.

The *agger* or bank of the fortifications of the Kings had been entirely disregarded in the time of the Republic and the early Emperors; there are several instances of remains of houses built upon the bank without the slightest regard to the injury done to the defences. More usually the line of street follows the same line as the wall, having been at the bottom or on the side of the old foss, and the houses have their backs built up against the bank, which is more or less cut away for the purpose.

In many parts of the city also the backs of the houses are against the *scarped cliffs*, and sometimes there are gardens on the upper level entered upon from the second or third story of the house. The destruction of the buildings of the Empire in modern times has thrown open the old walls in many places, where they could not have been visible in the time of Dionysius, as for instance the destruction of the magnificent brick terraces of the Cæsars has thrown open the walls of the Kings on the Palatine, and the excavation of the Lavacrum of Agrippina has thrown open part of the wall of the Kings behind it against the cliff of the Viminal. The circumference of THE CITY OF ROME, that is, the city of the Kings, can be more

easily traced now than it could in the time of the Empire, although unfortunately considerable parts of the old walls are now concealed in monasteries or nunneries, and cannot be seen or examined.

The PULCHRUM LITTUS was a stone wall supporting the bank of the Tiber from the line of the Aventine to that of the Capitol, along the low ground between the Palatine and the river. Considerable portions of this wall exist, and are in the style of the later kings, agreeing perfectly with the time of Tarquinius Priscus, who is recorded to have made the Circus Maximus^c by draining the marsh between the Palatine and the Aventine, and whoever did that must have built this wall. The stream that runs through the valley between the Palatine and the Aventine, originally formed the marsh by being dammed up at the lower end, and now serves as a drain to it, as it must always have done, for its natural course is through that valley. The mouth of this stream passes through the Pulchrum Littus into the Tiber, and the opening for it has evidently been left in the original construction, and not cut through afterwards. This opening is now under a vault with a tower and other buildings thrust out into the river, but it is so near the mouth that it can be seen from it. This sort of doorway in the wall of the Pulchrum Littus has been originally open at the top, or covered with a flat stone only; the present concrete vault is probably of the time of the Republic, or it may be medieval. The following is the legendary history:—

“He [Tarquinius Superbus] then applied himself to works of peace, with a degree of spirit which even exceeded the efforts he had made in war, so that the people enjoyed little more rest at home than they had during the campaigns; for he set about surrounding with a wall of stone those parts of the city which he had not already fortified, which work had been interrupted at the beginning by the war of the Sabines. The lower part of the city about the Forum, and the other hollows that lay between the hills, from whence it was difficult to discharge the water by reason of their situation, he drained by means of sewers drawn on a slope down to the Tiber.

“He [Tarquinius Priscus] also began the sinking of the sewers; these are trenches through which the water collected from every street is conveyed into the Tiber, a wonderful work exceeding all description^d.”

“He [Brutus] there made a speech no way consonant to that low degree of sensibility and capacity which until that day he had counterfeited; recounting the violence and lust of Sextus Tarquinius, the shocking violation of Lucretia’s chastity, and her lamentable death; the misfortune of Tricipitinus in being left childless, who must feel the cause of his daughter’s death as a greater injury and cruelty than her death itself; to these representations he added the pride of the king himself, the miseries and toils of the commons, buried under ground to cleanse sinks

^c Livii Hist., lib. i. c. 35.

^d Dionys. Halic., Ant., lib. iii. c. 68.

and sewers, saying that ‘the citizens of Rome, the conquerors of all the neighbouring nations, were from warriors reduced to labourers and stone-masons.’”

The wall of the Pulchrum Littus may be traced at intervals from the Porta Trigemina and the Pons Sublicius, opposite the Aventine, to the bridge popularly called the “Ponte Rotto.” It may have been continued as far as the Pons Fabricii, or “de’ Quattro Capi,” from the island, but in that part the wall is of a later period. The Salaria, or salt-wharf, has been rebuilt, so that there also no remains are visible; but near to this, at the Place called “Porta Leone,” opposite the Etruscan lions’ heads, and close to the mouth of the Mar-rana, several yards of this fine wall remain perfect, and may readily be seen by descending a rather steep path on the sand-bank in front of part of it. The mouth of the Cloaca Maxima is also made in a part of this wall.

That the JANICULUM was not considered part of THE CITY at this time, we have clear evidence, the Tiber being continually mentioned as the western boundary. At the same time it is evident that the Janiculum was, from a very early period, connected with the city by a covered way, and so should scarcely be omitted in speaking of the Primitive Fortifications. It is referred to by several authors.

“And those [parts] of which the river Tiber forms the defence. Of this river the breadth is about four plethra [400 ft.,] the depth sufficient to float large vessels, and the current equal in rapidity to that of any other river, and forming great eddies. The Tiber cannot be passed on foot, but only by a bridge, of which there was only one at that time, constructed of wood, and this they took to pieces in time of war^e.”

“The Janiculum also was taken in [by Ancus Marcius], not from want of room, but to prevent its serving at any time as an *arx* or place of strength to an enemy; and it was determined that this should be connected with the city, not only by a wall, but likewise, for the convenience of passage, by a wooden bridge which was then first built over the Tiber^f.

“He [Ancus Marcius] fortified also what is called the Janiculum, a lofty mountain situated on the other side of the river Tiber, and placed in it a sufficient garrison for the security of those who sailed upon the river. For the Tuscans, occupying the whole country on that side of the river, were in the habit of plundering the dealers in merchandise. The wooden bridge also, which is capable of being held together without brass or iron, by means of the wood itself, it is he that is said to have built over the Tiber. This bridge, up to the present time, they preserve with care, regarding it as sacred^g.”

^e Dionys. Halic., Ant., lib. ix. c. 68.

^f “Janiculum quoque adjectum; non inopia loci, sed ne quando ea arx hostium esset. Id non muro solum, sed etiam, ob commoditatem itineris, ponte sublicio, tum primum in Tiberis facto, conjungi urbi placuit.” (Livii Hist., lib.

i. c. 33.) The piers of a wooden bridge, called the Sublician bridge, which connected the city with the Janiculum, are still visible when the water is low in the Tiber, just within the line of the Porta Trigemina.

^g Dionys. Hal., Ant., lib. iii. c. 46.

“After that, they [the Roman Consuls] strengthened with more effectual fortifications and guards the hill called Janiculum, which is a high mountain near Rome, lying on the other side of the river Tiber, and took care above all things that the enemy should not possess themselves of so convenient a post to annoy the city, and there they laid up their provisions for the war^h.”

“Perceiving that this hill [the Janiculum] would form a strong position against the city, in case an army should advance against it, he surrounded it with a wall and ditch, and those that had been removed from Tellene and Politorium, and other cities of which he had gained possession, he settled in this placeⁱ.”

It was eventually included within the circuit of the walls of the Empire ; one object of this was to protect the flour-mills which had been made on the side of this hill.

The foss of the Janiculum is distinctly visible in the vineyards on the slope of it. In the upper part on the southern side, near the site now occupied by the church of S. Pietro in Montorio, a battery was erected in 1868 by the Pontifical Government, which has destroyed the outline of the old earthworks in that part. But below this, within the remains of the wall of Aurelian, it is quite visible down the side of the hill, nearly as far as the monastery of S. Cosimato. Under the church also the ancient scarped cliffs can be seen, and on the northern side, where the mills are placed upon the wall in the old towers, the foss is very evident on the outside of them, with a great difference of level between the inside of the wall and the outside. Remains of the towers and wall of Aurelian can also be distinctly seen built up against the scarped cliffs, now serving as substructure to the mills. This bank or foss goes down to the Tiber, passing by the Porta Settimiana.

The fortified palaces of the SESSORIUM and of the Lateran were probably external fortresses outside the city, each with its separate *agger* and foss, but were afterwards included in the boundary in the time of the Empire, when the present great wall was built by Aurelian.

^h Dionys. Hal., Ant., lib. v. c. 22.

ⁱ Ibid., lib. iii. c. 44.

SECTION VIII. GATES OF SERVIUS TULLIUS.

THE fortifications of Servius Tullius, as we have seen, consisted for the most part of strengthening the outer line of the old fortifications of the separate hills chiefly along the base of cliffs, and connecting them together by short pieces of wall and foss across the valleys at their narrowest points, making gates wherever they crossed a road, and on the side, where there was no cliff, making a large *agger*.

It has been contended that the passage in Pliny which gives thirty-seven as the total number of the gates, involves the supposition that there were at least twenty-five (according to another opinion thirty gates) in the line of the *enceinte* of Servius Tullius. An examination of the existing remains of this wall of *enceinte*, together with the evidence to be derived from scarped cliffs and ancient roadways, renders it probable that this number is excessive. In the next section the questions involved in the interpretation of the passage in question will be discussed. It is only necessary to say here that Pliny, in enumerating the gates, refers in all probability to the outer line of *enceinte*, which is usually attributed to Aurelian, but which was already recognised in Pliny's time as the wall of Rome (although not of THE CITY), and which, as has already been said, although raised and mainly rebuilt in the time of Aurelian, contains portions of an older wall, so that there must have been gates in it before his time.

In the older line of *enceinte* there are places for, and probably were, some fifteen or sixteen gates. No list is preserved to us, but in default it has been usual to take the name of the gates incidentally mentioned in ancient authors. From Varro, the most important authority on this question, as being the earliest, we obtain three names, viz. Nævia, Rauduscula, and Lavernalis, as in the circuit, and Mugionis, Romanula, and Janualis, as within the walls.

The following is a list of those which we think there is reason to place in the *enceinte* of Servius Tullius^k, and we have, as far as possible, assigned to them their probable position:—

^k See Nibby, *le Mura di Roma*, diseguate da W. Gell, illustrate con testo e note. 8vo., Roma, 1820. G. A. Becker, *de Romæ veteris muris atque portis*,

8vo., Lipsiæ, 1842; and Dyer, in *Smith's Dictionary of Antiquities*, 8vo., Lond. 1856. Burn's *Rome and the Campagna*, chap. iv. Cambridge, 1871; 4to.

I. Porta Flumentana.	VIII. Porta Viminalis.
II. „ Carmentalis.	IX. „ Esquilina.
III. „ Ratumena.	X. „ Querquetulana.
IV. „ Fontinalis (?).	XI. „ Cœlimontana.
V. „ Sangualis.	XII. „ Capena.
VI. „ Salutaris, or Piacu- laris.	XIII. „ Raudusculana.
VII. „ Collina, or Quirinalis.	XIV. „ Nævia.
	XV. „ Trigemina.

I. PORTA FLUMENTANA¹.—This was near the bank of the river, and therefore probably across what is now the Via di Porta Leone, which, although a modern street, follows the course of an ancient one, running at a low level parallel to the river.

In the year of Rome 559^m, a large part of the city, in the neighbourhood of this gate, was inundated. Again, in the following year, the two wooden bridges were carried away and many buildings destroyed, especially near this gateⁿ. It was sufficiently near the river for the stream to flow through it in time of flood, as mentioned by Paulus Diaconus^o; it therefore probably stood between the Porta Carmentalis and the river, and on lower ground. Varro^p implies a populous suburb existing outside of this wall and gate, which is still the most populous part of Rome, the Ghetto or Jews' quarter. Here was also a place called *lucus Pætelinus*, mentioned by Livy in his account of the trial of Manlius^q, whence there was an open vista into the Capitol, through which the temples of the gods could be seen. This gate is also mentioned by Cicero in his letters to Atticus, but without any indication as to site^r.

II. PORTA CARMENTALIS^s.—This gate must have been very near to the foot of the Capitol, and between it and the Porta Flumentana already mentioned. The exact line of the wall of Servius Tullius, connecting the fortifications of the Capitol with the river, cannot now be traced, and hence the position of the two gates, the Flumentana and Carmentalis, is uncertain. As the former was probably across

¹ See Note A, at the end of this Section.

^m “Aquæ ingentes eo anno fuerunt, et Tiberis loca plana Urbis inundavit. Circa portam Flumentanam etiam collapsa quædam ruinis sunt; et porta Cœlimontana fulmine icta est, murusque circa multis locis de cœlo tactus.” (Livii Hist., lib. xxxv. c. 9.)

ⁿ “Tiberis, infestiore quam priore impetu illatus Urbi, duos pontes, ædificia multa, maxime circa portam Flumentanam, evertit.” (Livii Hist., lib.

xxxv. c. 21.)

^o “Flumentana porta Romæ appellata, quod Tiberis partem ea fluxisse affirmant.” (Pauli Diaconi Epitome P. Festi, ed. Odofr. Mueller, p. 89.)

^p Varronis R. R., iii. 2.

^q Livii Hist., vi. 20.

^r “Nescio enim, cur, quum portam Flumentanam Cælius occuparit, ego Puteolos non meos faciam.” (Cic., Epist. ad Att., lib. vii. ep. 3.)

^s See Note B, at the end of this Section.

the Via running nearest to the river, so the latter was probably across the Via della Bocca della Verità, which runs parallel to it, but nearer to the Capitol, the exact spot probably being where the Via della Consolazione meets that street. Livy gives a distinct account of a great conflagration, in which the temples both outside and inside of the Porta Carmentalis were burnt.

[A.U.C. 539, B.C. 213.] “A terrible fire held Rome bound for two nights and a day, the whole of the ground between the Salinæ and the Porta Carmentalis, with the streets of Æquimælius and Jugarius. In the Temple of Fortune and of Mater Matuta, and of Spes outside the gate, the wandering fire burnt many things both sacred and profane.”

“... Others were appointed to see to the rebuilding of the temples of Fortuna and Mater Matuta, which were inside the Porta Carmentalis, and that of Spes, which was outside the gate^t.”

It must, therefore, have been very near to the present church of S. Nicolas in Carcere, which contains the foundations and other parts of the temple of Spes. The fire, as we see, damaged also two temples in the Forum Boarium, and extended as far as the Salaria or salt-wharf on the Tiber.

Livy^u elsewhere mentions that a procession starting from the temple of Apollo, (which was in the direction of the Circus Flaminius,) passed through the Porta Carmentalis and the Vicus Jugarius on its way to the Forum Romanum. The Vicus Jugarius is without doubt the part now occupied by the Via della Consolazione.

The gate was named from an altar that stood near to it, dedicated to a god of that name. The altar and gate of Carmenta are mentioned by Virgil, and noted in the Commentaries of Servius^v. Solinus^x also mentions the situation of it as at the foot of the Capitol, and Festus^y says that by some it is called Scelerata, by others Carmentalis.

III. PORTA RATUMENA.—This must have been somewhere in the

^t Livii Hist., xxiv. 47, xxv. 7.

^u Ibid., lib. xxvii. c. 37.

^v “Vix ea dicta; dehinc progressus, monstrat et aram,
Et Carmentalem Romano nomine portam
Quam memorant, Nymphæ priscum Carmentis honorem,
Vatis fatidicæ: cecinit quæ prima futuros
Æneadas magnos et nobile Pallanteum.”

(Virgilio *Æn.*, lib. viii. v. 337.)

“Est autem juxta portam quæ primo a Carmenta Carmentalis dicta est,” &c. (Servius.)

^x “Pars infima Capitolini montis habitaculum Carmenti fuit, ubi Carmentis

nunc fanum est, a quo Carmentali portæ nomen datum est.” (Jul. Solin., *Polyhist.*, cap. i.)

^y “Scelerata porta eadem appellatur a quibusdam, quæ et Carmentalis dicitur, quod ei proximum Carmentæ Sacellum fuit; scelerata autem, quod per eam sex et trecenti Favi cum clientium millibus quinque egressi adversus Etruscos, ad annem Cremeram omnes sunt interfecti.” (S. Pomp. *Festi de verborum signific.* quæ supersunt, ed. Od. Mueller, p. 334, col. i. l. 2. Lips., *M DCCC XXXIX*, 4to. p. 285, col. i. l. 5.)

agger joining the Capitol and the Quirinal, as we read in Plutarch of the charioteer whose horses ran away at Veii, and whose mad career was only stopped at this gate, when the charioteer was killed at the foot of the Capitol.

“But as the winning chariot was being slowly driven off the course by the charioteer decked with his crown, the horses suddenly took fright without any apparent cause, but by some supernatural impulse, or chance, and started off at full speed with their driver towards the city of the Romans. When he attempted in vain to pull them in, or stop them by his voice, and was hurried [helplessly] away, he yielded to the impulse and was carried along, until the horses arriving at the Capitol, flung him out at that spot, in the neighbourhood of the gate which they call *Ratumena* ².”

The same story is told by Festus and Pliny ^a, the former asserting that the name of the gate was that of the Etruscan charioteer who was killed on this occasion. The exact site of the gate is generally said to have been just within the tomb of Bibulus, and in the *agger* which connected the fortifications of the Quirinal with those of the Capitol ^b.

IV. PORTA FONTINALIS. —The only reference to this gate is that by Livy, where he says that the Ediles, M. A. Lepidus and A. Paulus, made a *porticus* from the *Porta Fontinalis* to the Altar of Mars [B.C. 193]. From his speaking of a way out into the *Campus*, it has been thought, without doubt, the Campus Martius is meant, as he uses the word in several places to mean the Campus Martius, and this Campus only. Beyond this we learn there was an Ara Martis in this part of Rome. It is impossible to determine the spot unless the site of this altar be discovered. Very possibly it was in the *agger* near the Torre dé Conti, where remains are seen of the time of the Kings.

The gate is however considered by Nibby to have been connected with a Campus Fontinalis on the Cœlian, and he further considers that there was a road from it to the *Temple* of Mars outside of the city, and that there was a porticus or covered way from this gate across the valley to the temple, which contained an Altar to Mars ^c. According to this view, this gate must have been near the south-west corner of the Cœlian, where an ancient road may be traced, and is still a cart-road in the field of the Villa Mattei, leading to the church

² Plut. *Poplicola*, c. xiii.

^a Festus, s. v. *Ratumena*; Plin., lib. viii. c. 65: cf. Solin., c. xlv. (al. lvii.)

^b There seems to be reason (see chap. ii. sect. i.) for placing the *agger* further to the south, so that the Fora of Nerva, Augustus, Julius Cæsar, and Trajan

were outside of it. In that case, the gate would have been near the Arch of Septimius Severus.

^c “Porticum unam . . . alteram a porta Fontinali ad Martis aram, qua in Campum iter esset, perduxerunt.” (Livii Hist., lib. xxxv. c. 10.)

of S. Maria in Domnica, which would stand in this so-called "Campus Fontinalis." This field is now part of the garden of the Villa Mattei, and possibly had several fountains in it or around it, where afterwards the large reservoirs of the aqueducts were placed.

This gate is mentioned in an inscription on a tombstone now in the Lapidarian corridor of the Vatican Museum, and published by Gruter^d, which is said to have been found on the Via Appia, but on what part of the road does not appear^e.

Festus, under the word 'Fontinalis,' mentions both the fountains and the gate^f. The festival of the Fontinalia, in connection with this gate and field, is also mentioned by Terentius Varro^g.

V. PORTA SANQUALIS sive SANGUALIS. This is supposed to have been on the ascent to the Quirinal, near to a temple of Sancus, which is mentioned by Livy^h as near that of Quirinus. Festusⁱ says that this gate and figure of a bird were named Sanqualis from Sancus or Sanquus, whose temple stood near this gate : the probable site is at the end of the Via della Dataria, where it runs into the Piazza di Monte Cavallo, as here seems to have been the chief ascent on to the Quirinal Hill.

VI. PORTA SALUTARIS and PIACULARIS.—The Porta Salutaris was on the northern edge of the Quirinal, near the temple of Salus, which is believed to have stood on part of the site now occupied by the pontifical palace ; this temple is mentioned by Varro^k, Livy^l,

^d DIS MANIBVS
A APIDI
MATORIS
TABELLARI
A PORTA
FONTINALI

(Gruter, p. dcxxiv. n. 12.)

^e This is adduced by Nibby as additional evidence that the Ara Martis, mentioned by Livy, to which the road and portico led from the Porta Fontinalis, was the same as the Ædes Martis on the Via Appia mentioned in Regio I., and not the one in the Campus Martius ; and further, that it supports his theory that this Temple of Mars was on the north end of the hill, outside of the Porta Capena, opposite to the Thermæ of Caracalla ; but it must be noticed that it is only a memorial-stone.

^f "Fontinalia, fontium sacra. Unde et Romæ Fontinalis porta." (Festus, De Verb. Sign., lib. vi., in voce Fontinalia, ed. Odfr. Mueller, p. 85.)

^g "Fontinalia a fonte, quod is dies feriæ ejus, ab eo autem tum, et in fontes

coronas jaciunt, et puteos coronant." (T. Varro de Ling. Lat., lib. v. c. 3.)

^h "Ædes ejus, quæ essent in Palatio, diruendas, bona Semoni Sanco censuerunt consecranda : quodque æris ex eis redactum est, ex eo ænei orbes facti, positi in sacello Sanci adversus ædem Quirini." (Livii Hist., lib. viii. c. 20.)

ⁱ "Sanqualis porta appellata est proxima ædi Sanci, ideoque eodem est nomine, quæ avis Sanqualis appellatur. . . . Sanqualis avis appellatur, quæ in commentariis auguralibus ossifraga dicitur, quia in Sangi dei tutela est." (Sext. Pomp. Fest. de Verb. Signit., pp. 317, 343, 345, ed. Odofr. Muell.)

^k "Collis Salutaris quarticepsos ædem Quirino : collis Salutaris quarticepsos adversum est pila Naris (al. Honoris), ædem Salutis." (T. Varro de Ling. Lat., lib. v. c. 8.)

^l "Eodem anno [A.U.C. 451] ædes Salutis a C. Junio Bubulco censore locata est, quam consul bello Samnitium voverat." (Livii Hist., lib. ix. c. 43.)

and Pliny^m, and is named in the *Notitia* and *Curiosum Urbis* as being in the sixth Regio. A part of the Quirinal Hill was also called after this temple : the probable site is where the Via Rasella joins the modern Via delle Quattro Fontane.

The Porta Piacularis is mentioned by Festusⁿ as the gate where certain expiatory sacrifices were offered, and he quotes Cloatius as his authority ; so far as has been observed it is not mentioned by any other author, and Becker classes it with the doubtful and uncertain gates. This name may have been applied on the special occasion when it was so used only. Some think that it was only another name for the Porta Salutaris ; perhaps, however, it was a gate near to it, and there seems a natural place for a gate where the road passes through the line of fortification at the north-west corner of the Baths of Diocletian.

VII. PORTA COLLINA^o.—This was an important gate at the north-east corner of the old city. The modern Porta Pia is in the same direction in the outer circuit, having the Porta Salaria to the north, and the closed Porta Nomentana to the south ; this part of the Via Nomentana having been altered and carried further to the north. The Porta Collina was at the north end of the *agger* of Servius Tullius, which curves inwards towards it. The earthwork on which the house of Sallust was afterwards built, probably served originally as a semi-detached fort or horn-work for the protection of the gate^p. It was considered the weakest point in the defence of the city ; it was here that the Gauls entered, it was the most usual point to be attacked, and was frequently burnt both during the Republic and under the Empire.

“Through it [the Porta Collina] passes the Via Salara, which is of no great length. This is joined at Eretum, a village of the Sabines, situated on the Tiber, by the Via Nomentana, which commences above the same Porta Collina^q.”

The PORTA QUIRINALIS is considered by Festus the same as the Porta Collina. The Quirinal, he says, was called by the ancients the Collis, and hence the gate was usually called by that

^m “(Fabius) ædem Salutis pinxit anno Urbis conditæ CCCCL. quæ pictura duravit ad nostram memoriam, æde Claudii principatu exusta.” (Plinii Nat. Hist., lib. xxxv. c. 7.) See also Dionys. Hal., ix. 68.

ⁿ “Piacularis porta appellatur propter aliqua piacula, quæ ibidem fiebant.” (Festus, s. v. Piacularis, ed. Odofr. Mueller, p. 213.)

^o This gate is believed to be the one called Agonalis by Festus, under the word Agonium.

^p Livii Hist., xii. ; Dionys. Hal., ix. 68.

“... procul porta Collina est totius viribus urbis.” (Livii Hist., vii. 11.)

“... inter Esquilinum Collinum que portam posuit castra.” (Ibid., xxvi. 11.)

^q Strabo, lib. v. c. iii. § 1.

name, but it was also called Quirinalis from the adjacent temple of Quirinus^r.

VIII. PORTA VIMINALIS.—This is mentioned by Frontinus as the gate to which some of the aqueducts were brought to be distributed over the city^s; it is also mentioned by Strabo and Festus. Its site is believed to have been at the south-east corner of the Thermæ of Diocletian, on the line of the old road which ran through the outer gate, (now called Porta Clausa or Chiusa,) and passed along the south side of the Prætorian Camp. This gate was therefore about the middle of the *agger* of Servius Tullius.

“Servius raised upon the *agger* a wall and towers from the Porta Collina, as far as the Porta Esquilina. About the middle of the *agger* is the third gate, of the same name as the Viminal Hill^t.”

IX. PORTA ESQUILINA^u.—This was at the south end of the *agger* of Servius Tullius, where it joined the cliff of the Esquiline Hill; the same name was given to the outer gate in the *mœnia*, over which the aqueducts were carried. Several passages in Livy and Strabo (given below) confirm this, and the text of Frontinus cannot be reconciled with the existing remains in any other manner. Strabo says that the two roads, Prænestina and Labicana, began at this gate, and they now begin at the Porta Maggiore, in the exterior circuit, which being at least as old as the time of Claudius, as is proved by the inscription upon it, must have been in existence in the time of Strabo. Frontinus says that the Aqua Marcia enters Rome at the Porta Esquilina, then passes under some high ground, and emerges on an arcade near the Porta Viminalis. The remains are distinctly visible entering Rome through the outer wall by the side of the Porta Maggiore, then passing underground, (where a part has been excavated in 1871,) in the direction of the Porta di S. Lorenzo, all on the outer wall, and near that part of the arcade with the *specus* of the aqueduct upon it which was excavated in 1870.

^r Festus, s. v. Quirinalis.

^s In this instance, as in some others, there must have been another gate in the outer *mœnia* called by the same name; the words of Frontinus, compared with the existing remains, are decisive on this point. The remains of the gate *in the agger* were destroyed in making the railway.

^t Strabo, lib. v. c. iii. s. 7. See Note C, at the end of this Section.

^u “. . . postero die frequentis porta Esquilina . . . expellerunt pecus.” (Livy Hist., lib. ii. c. 11.)

“. . . ad mœnia ipsa Romæ populabundi regione Portæ Esquilinæ accessere vastationem agrorum urbi per contumeliam ostentantes.” (Ibid. iii. 66.)

“. . . iisdem istis ferocibus animis egredissimi extra portam Esquilinam, aut . . . ex muris visite agros vestros.” (Ibid., iii. 68.)

“. . . media urbe per carinas Esquilias contendit; inde egressus inter Esquilinam Collinamque portam posuit castra.” (Ibid., xxvi. 10.)

“. . . lupus Esquilinæ porta ingressus.” (Ibid., xxxiii. 26.)

It appears strange at first sight that the same name should be given to two gates, one in the inner wall, the other in the outer line of defence; yet such must have been the case in Rome, and is still the practice in the Leonine City, where two gates, one in the inner wall the other in the outer wall, are both called *Porta Angelica*. Different names were also given to the same gate, according to circumstances. The great eastern gate of Rome, now called the *Porta Maggiore*, was called *Prænestina* by those going to *Præneste*, *Labicana* by those going to *Labicum*, *Esquilina* by both on returning to Rome, as leading into the *Esquilæ*, the great burial-ground in the time of the Republic, between the *Esquiline Hill* and the eastern boundary. In the same manner the gate now called the *Porta di S. Lorenzo* was called *Tiburtina* by those going to *Tibur*, and *Viminalis* by those entering Rome and going to the *Viminal Hill*; the meadows or gardens into which it immediately entered, between the hill and the outer boundary, were also called *Campus Viminalis*. From the inner *Esquiline* gate in the great *agger*, (near the site of the great church of *S. Maria Maggiore*), two roads diverged, one to the south-east going along the present *Via di Porta Maggiore*, and out of that gate; the other to the north-east going by *S. Bibiana*, and out by the *Porta di S. Lorenzo*. Both of these old roads still exist, though in a very neglected state, and not passable for carriages.

The *Porta Chiusa*, to the north of the *Porta di S. Lorenzo*, was on another road to *Tibur* through the *Via Cupa*, the shortest road from many parts of Rome, and the oldest road near Rome, cut through the rock to the depth of twenty feet, and unaltered, but also entirely neglected, and not passable for carriages. The aqueducts go on to the *Porta Chiusa* and the *Prætorian Camp*.

This line, along which the aqueducts were carried, is the highest ground in Rome, being on the main high ground from which the *Quirinal*, *Viminal*, and *Esquiline*, are only promontories, and this agrees with *Frontinus*^x, who says they were carried on the highest part after they had entered the town.

The *Via Latina* is now a bridle-road only, but the line it takes is well marked out by the tombs on each side of it, and it unites with the *Via Labicana* about seven miles from Rome, a little to

^x "Omnes aquæ diversa in urbem libra perveniunt, inde fluunt quædam alternibus locis, et quædam erigi in eminentiora non possunt, nam et colles," &c. (*Frontinus de Aquæductibus*, lib. i. c. 17.)

"... dein Marcia, quæ ad libram collis Viminalis... fluentes ad Viminalem usque portam devenient ibid rursus emergunt." (*Ibid.*, i. 19.)

the north of the Piscinæ, at the junction of the roads from Marino, and Frascati, or Tusculum.

“Then it [the Via Latina] is joined also by the Via Labicana, which begins at the Porta Esquilina, the same at which the Prænestina commences ; and leaving on the left this latter road and the Esquiline plain, it then proceeds for more than 120 stadia, and after approaching old Labicum, a ruined colony situated on a height, it leaves this and Tusculum on the right, and ends at Pictæ on the Latin way. This place is distant from Rome 210 stadia^y” [about 25 miles].

X. PORTA QUERQUETULANA or QUERQUETULARIA.—There can be no doubt that there was an important gate in the valley between the Esquiline and the Cœlian, near the present church of S. Clemente. The extremities of both these hills were covered with oak forests, and hence the Cœlian was often called Querquetulana, and the Sacellum Querquetulanum is mentioned by Varro^z. These oak forests are mentioned by Tacitus^a, and the gate also by Festus^b and Pliny^c.

There is a semi-detached fort or horn-work to defend the entrance to this valley, with a tufa wall of the character of the Kings on the north side, and an arcade of the early Empire built up against it on the south, and the foss round three sides of it may still be clearly seen^d. It is quite possible that there was in the original fortification another gate at the entrance to the valley, a quarter of a mile to the east of the wall of Servius Tullius.

XI. PORTA CÆLIMONTANA.—This gate is mentioned by Cicero and Livy, and is supposed to have stood at the eastern end of the Cœlian, near where three streets meet, first the Via di S. Stefano Rotondo ; the second from the Quattro Santi Coronati ; and the third the Via di S. Giovanni ; the two last are modern, that is, made in the time of the Popes, not belonging to ancient Rome, but they all meet at the same point near the Lateran Palace. The Baptistery is built outside of this gate, and so outside the city, on the east side

^y Strabo, lib. v. c. iii. s. 9. A Stadium is about 200 yards.

^z “Secundæ regionis Esquilinæ . . . Item lucus Larum, Querquetulanum sacellum.” (T. Varro de Ling. Lat., lib. iv. c. 8.)

^a Taciti Annales, lib. iv. c. 65.

^b Festus in voce Querquetulanæ : “Querquetulanæ ut reputantur significari Nymphæ præsidentes querqueto virescenti, quod genus sylvæ indicant fuisse intra portam, quæ ab eo dicta sit Querquetularia,” &c. “Querquetularia porta Romæ dicta, quod querque-

tum intra muros Urbis juxta se habuerit.” (Sext. Pomp. Fest. ed. Od. Muell., pp. 260, 261.)

^c “Sylvarum certe distinguebatur insignibus. Fagutali Jovi etiam nunc, ubi lucus fageus fuit : porta Querquetulana,” &c. (Plinii, lib. xvi. c. 15.)

^d This is now a *cabaret*, with shady bowers formed in the niches of the time of Augustus ; to see the foss distinctly, it is necessary to go up the steps into the garden and look over the cliffs on the three sides.

of the foss, which may be distinctly seen in the vineyard passing between the Coelian and the Lateran, with a cliff on each side of it, supported by a brick wall. The gate was necessarily on the western side of the great foss, and on the Coelian proper; the Lateran was probably on the Coeliolus, and separated from the Coelian by the foss, across which the *agger* or bank to carry the aqueducts was made, with the road from the arch of Dolabella on the top, and so the foss is in part filled up, and not apparent at first sight. But under a part of the artificial bank of the road from the Santi Quattro is an arch and a path from one part of the Campana garden to the other, and under the bank itself is a tomb with reticulated-work of the first century, or not later than the time of the Emperor Hadrian. Another tomb of the first century, of a much finer character and more perfect, remains on the bank on the eastern side of the foss, popularly called the house of Verus, but really in all probability the tomb of the Lateran family^e.

The words of Cicero^f respecting this gate are very explicit, and mark the situation of the gate as being on the Coelian and near the Esquiline.

“When I tell him to enter by the Porta Coelimontana, I would lay a wager that in his hurry he would enter by the Esquiline.”

Livy also refers to it, but does not indicate the site :—

“And the gate Coelimontana was struck by lightning, and the wall round it damaged in several places^g.”

XII. PORTA CAPENA.—This gate was situated in the valley between the Coelian and the Aventine, and near the southern end of the Circus Maximus; the line of the *agger* and wall in which it was situated is distinctly marked by the remains of the piers of the aqueduct which was carried upon it, and there are remains of these piers on both sides of the modern Via Appia at the point indicated. This subject is fully discussed in the account of the first Regio, which is named after it, and in the Chapter on the Aqueducts, under the head of the Aqua Appia, which passed over this gate.

It is probable that there were two gates that bore this name, as in the case of the Portæ Esquilina and Viminalis. The outer gate, now called Porta di S. Sebastiano, was long called Porta Capena,

^e See the Chapter on Tombs.

^f “Cum ego Coelimontana porta introisse dixissem, sponsione me, ni Esquilina introisset, homo promptissimus la- cessivit.” (Cicero, Oratio in Pisonem,

cap. 23.)

^g “. . . et porta Coelimontana fulmine icta est, murusque circa multis locis de cœlo tactus.” (Livii Hist., lib. xxxv. c. 9.)

and this was very likely a traditional name, for names are commonly traditional. There may even have been a third gate of the same name at the junction of the Via Latina with the Via Appia, where Visconti and some of the Roman Antiquaries place the Porta Capena^h; this name seems to have applied to a district called after the gate at the end of it.

XIII. and XIV. PORTA RAUDUSCULANA and PORTA NÆVIA.—For the general position of these two gates we have the best possible evidence; the inscription on the Basis Capitolina places the streets named after these two gates in the twelfth Regio, called Piscina Publicaⁱ. They are also mentioned together in Varro^j.

As to the first, there can be no doubt that Raudusculana is the more correct reading, and that it was so called because it was of unpolished brass or bronze. The words of Varro agree nearly with those of Valerius Maximus^k, who accounts for the origin of the name by saying it was derived from a brazen or bronze head placed over the gate, and that Raudus was an old name for brass.

There is reason to believe that the road from Ardea (Via Ardeatina), after passing through the gate of that name in the outer circuit, passed between the churches of S. Balbina and S. Sabba through the Porta Raudusculana. There is an important position for a gate here. The Via Ardeatina passed over the high ground under which the Thermæ of Caracalla were erected.

The second gate, or Porta Nævia, appears to have been in the valley between the Aventine and the Pseudo-Aventine, where the road from the Porta Ostiense meets those from S. Prisca and S. Sabba. At this point, by the side of the present road up to S. Prisca, which is on the mound or *agger*, a portion of the ancient foss-way remains open for the space of about a hundred yards from the corner; about twenty feet below the level of the present road, which is on the *agger*, the foss-way has an old pavement, but mediæval, not original,

^h That the principal gate of that name was in the wall and *agger* of Servius Tullius between the Cœlian and the Aventine, upon which the aqueducts were carried, was demonstrated by my excavations in 1869 and 1871. By the filling up of the foss-way, the remains are buried twenty feet deep.

ⁱ VICVS PORTAE RVDVSCVLANAE.

— PORTA NÆVIA..

(Basis Capitolina.)

We consider that the Vicus Nævia formed the boundary of the Regio at the north-west corner.

^j “Deinde porta Rauduscula, quod ærata fuit (æs raudus dictum); ex eo in veteribus mancuspis (manuscriptis?) scriptum, Raudusculo libram ferito. Hinc porta Lavernalis ab ara Lavernæ, quod ibi ara ejus deæ.” (T. Varro de Ling. Lat., lib. iv. c. 34.)

^k “Genucio Cipo Prætori, paludato portam egredienti. . . . Cujus testandæ rei gratia capitis effigies æreæ portæ, qua excesserat inclusa est: dictaque Raudusculana, quod olim æra raudera dicebantur.” (Valerius Maximus, Fact. dictorumque mem., lib. v. c. vi. § 4.)

this portion of the old foss-way having been preserved to give access to a stone quarry under the hill at the end of it. This gate is described by Varro as being in the woods of the same name, where the goddess of that name also was worshipped¹. The Porta Nævica is mentioned by Livy^m as the gate from which the consul, Lucretius, issued with part of the Roman army in the war with the Etruscans, so as to circumvent the enemy, who had crossed the Tiber. A body of soldiers were posted at the Collina gate to cut off their return to the river on the north of Rome, and these were to cut off their retreat on the southern side. The event is placed in the year of Rome 246 [B.C. 506]. It was probably at the head of the gorge near the Priorato at the south-west angle of the Aventine.

XV. PORTA TRIGEMINA.—The name of this gate is of frequent occurrence in the history and topography of Rome ; it was situated in the narrow strip of land between the Aventine and the Tiber, and is said to have had three arches, whence its name. One of them exclusively for the salt carts going to and from the salt-wharf and warehouse, a second for the emporium of general merchandise outside the city, the third for the general traffic. The number of carts, or of pack-horses, laden with salt must have been very numerous, as they still are, notwithstanding the great decrease in the population of the city : as the country houses and villages for many miles round always depended on the port of Rome for their supply of salt, and it may have been necessary to devote two gates for this purpose, one for those going to the wharf to load, the other for those returning loaded. This gate is mentioned by Frontinus in such a manner as clearly to identify its situationⁿ. The

¹ "Sequitur Porta Nævica, quod in nemoribus Næviciis. Nævicius enim loca ubi ea sic dicta, coluit." (T. Varro de Ling. Lat., lib. iv. c. 34.)

^m "Consulum alter T. Lucretius porta Nævica cum aliquot manipulis militum egressus : ipse Valerius Cælio monte cohortes delectas educit, hique primi apparuere hosti. Herminius, ubi tumultum sensit, concurrit ex insidiis, versisque in Lucretium Etruscis terga cædit. Dextra lævaque, hinc a porta Collina, illinc ab Nævica, redditus clamor." (Livii Hist., lib. ii. c. 11.)

ⁿ The cave reservoir at the mouth of the Aqua Appia is very near the remains of the Sublician bridge, and Frontinus says this was at the Porta Trigemina. It seems probable that the

whole slip of land between the Aventine and the Tiber was called sometimes the Salaria, from the salt wharf and warehouses forming part of it, and Porta Trigemina from the gate in it. Or it may well be that there were three double gates, that is, a gate with two arches, as in several of the other gates, and that these were called the three Gemina, or twin gates. Frontinus says that the reservoir at the mouth of the Aqua Appia was at the Porta Trigemina, and at the foot of the Clivus Publicii (or Sublicii?). We find it in a cave near the southern end of this slip of land, near the Sublician bridge and the salt-wharf, and at the foot of an ancient clivus, or steep road for horses only, sloping up the side of the

district in which it stands was called the Salaria. The wooden or Sublician bridge was in immediate connection with this gate, and one of the three arches may have belonged to the road that passed over that bridge. The Marmorata, or marble-wharf, was on the outside. The close vicinity of the gate and the bridge is incidentally mentioned by Aurelius Victor in relating the death of Caius Gracchus^o. There are some remains of the old gate of the time of the Kings and of the Empire in the wall by the side of the road, near a medieval arch in a building called Torre della Salaria, which crosses the road^p.

Besides these gates there are others mentioned. The three gates of the Palatine, (1.) Porta Mugionis, (2.) Porta Romana, and (3.) the southern gate (unnamed), have been referred to, as also those of the Capitol, (4.) Porta Saturnia, and (5.) Porta Stercoraria, under the account of the respective hills. The gate, or as it is commonly called, (5.) the Arch of Janus, has been referred to. All these were *within*, but distinct from the line of *enceinte* of Servius Tullius.

There are two gates which should be named, which were between the *enceinte* of the city and the Aurelian Wall, namely, the (6.) Porta Triumphalis and the (7.) Porta Navalis.

(6.) The Porta Triumphalis, mentioned as the gate through which the triumphal processions passed on their entrance into the city^q, stood, there is no doubt, somewhere in the Campus Martius.

The only spot where remains are found which would answer to the purpose of such a gate is at the west end of the church of S. Angelo in Pescheria, and forming the entrance to the portico

cliff in the garden of the monks of S. Sabina, the lower part of it cut off to make room for the roof of a "large warehouse." There are remains of a tufa wall across this strip of ground close to the Sublician bridge, or to the medieval arch across the road, or about the middle of the space from the Forum Boarium to the Marmorata; there may have been gates also at each end of the slip. There were frequently several gates to defend the approach to an ancient fortress. At Maiden Castle, in Dorsetshire, there are said to have been nine gates at the principal entrance, one in each of the banks which remain, the road being in the foss between them, and the gates at the angles of the zigzag approach; such was not an unusual defence of the entrance to an earthwork.

^o "... ubi ab Opimio victus, dum

a templo Lunæ desiliit, talum intorsit, et Pomponio amico apud Portam Trigemina, P. Lætorio in ponte Sublicio, persequentibus resistente, in lucum Eurinæ pervenit." (S. Aurelii Victoris de Viris illustr., cap. 65. C. Gracchus.)

^p See Regio XIII., and Note D, in the Appendix to this Section.

^q That is to say the *city proper*. As will be explained in the next section, the wall of fortification was already extended to the line afterwards occupied by the wall of Aurelian, but there is a line of streets running parallel to the foss, at the foot of the Capitol on the north side. This line probably follows the foss which marked the limits of the *pomærium* of the city at that time. The portico of Octavia is in this line, and the gate, if there, had no connection with the fortification, and is therefore omitted from the list.

of Octavia. The remains, consisting of an arch at each end, with five columns and a pediment on each side, shew an important gateway; moreover, it stands on the line of the Via Triumphalis. The questions connected with the references in ancient authors to the gate will be discussed in Regio IX.

(7.) Porta Navalis.—This gate, Festus^r tells us, was named from the Navalia or public docks on the bank of the Tiber, and possibly the gate which stands near the south-west corner of the Aventine, and is now known as the Arco di S. Lazzaro, may be the gate in question. Precisely at that point a brick arch of the first or second century of the Christian era crosses the road under the Aventine, outside of the Porta Trigemina, but not on the road on the bank of the river that passes through that gate, which continues in a straight line along the bank to the Emporium, whereas this gate is on the branch road from the Porta Ostiense. Becker^s brings forward a Catena of authorities to shew that the Navalia or Docks were in the upper part of the turn of the river, near the Campus Martius, where there is now a port in the river and a landing-place. But there evidently were also Navalia, or large mercantile docks for vessels coming *up the river*, which were not able to pass beneath the bridges, just as the chief port of London is *below* London Bridge. The port at the upper end would be for boats which were of lighter draught, and especially for vessels coming *down the river*; but the more important docks must have been near the Emporium, at the foot of the Aventine, below the bridges. The gate was probably in the wall of the enclosure of the Docks and Custom-house.

The following gates have been omitted from the list, either because their sites are altogether unknown, or because there is reason to suspect they are rather misreadings.

(8.) Porta Catularia.—This gate is mentioned by the Scholiast upon Suetonius^t, in his life of Augustus, and said to be on one side of the Porta Triumphalis, the Porta Flumentana being on the other. The gate is also mentioned in the Epitome of Festus by Paulus Diaconus^u, without any indication of the site, although from the mention of the sacrifices of the dogs, it is implied that it was without the city, and therefore not within the line of *enceinte*.

^r "Navalis porta a vicinia navalium dicta." (Sext. Pomp. Fest. in voce *Navalis*, ed. Odofr. Mueller, p. 179.)

^s Becker, de Romæ veteris Muris atque Portis, pp. 95—97.

^t "Porta Triumphalis media fuisse videtur inter Portam Flumentanam et

Catularium." (Scholiast. Suetonii ad Aug. 100, ap. Becker, p. 106.)

^u "Catularia porta Romæ dicta est, quia non longe ab ea ad placandum caniculæ sidus frugibus inimicum rufæ canes immolabantur," &c. (Sext. Pomp. Fest., in voce *Catularia*, ed. Muell., p. 45.)

(9.) *Porta Mæcia* or *Metia*.—This gate is mentioned by Plautus^x twice, also by Paulus Diaconus in the *Epitome* of Festus^y. It is supposed by the latter to derive its name from a castle on the Esquiline, the seat of a family of that name mentioned by Livy; but he evidently considers it as a doubtful matter, and mentions two opinions as to the origin of the name, which leaves both this and the exact situation open questions. Dyer considers this name to be only a false reading of Plautus, but the ground for this is not apparent. Plautus, it will be observed, refers in one passage to the burning of bodies outside this gate, and in the other to the animals which seem to have been kept there ready for sacrifice. It has been considered to be another name for the Esquiline gate, as it was out in this direction where the refuse of the city was cast. At this time, however, the place for refuse was probably beyond the outer line, and in that case the *Porta Metia* would be the *Porta Chiusa*, to which no name has been given by the antiquaries^z.

(10.) *Porta Lavernalis*.—This gate follows next in order in the list given in Varro after the *Porta Nævia* and *Raudusculana*, and is therefore supposed to have been also on the Aventine. The name of this gate is said to be derived from an altar of the Latin goddess named *Laverna*^a, which stood on the Aventine near to it.

There is a gorge upon the Aventine near the western corner, at the upper extremity of which is the evident place for a gate. It is in the same great vineyard—formerly of the Jesuits, now of Prince Torlonia—as the private house of Trajan, and near to it, just to the south of the *Priorato*; this seems the most probable site for the gate in question. This position, however, does not agree with the order of Varro, as according to this the *Porta Raudusculana* would be between the two others, whereas this position of the excavated gate

^x “Face, Chaline, me certiolem, quid meus vir me velit.

“CHAL. Ille edepol videre ardentem te extra portam Metiam.”

(Plauti *Casina*, act. ii. sc. 6.)

“CA. Propera, quid stas? arcesse agnos: audim’ quid ait Juppiter?

“PS. Jam hic ero: verum extra portam Metiam currendum est prius.

“CA. Quid eo?

“PS. Lanios inde arcessam duos cum tintinnabulis.”

(Plauti *Pseudolus*, act. i. sc. 3.)

^y “Metia porta ea est quæ nomen a Metio Asthemio habet, qui pro peste sedata diis omnia quæ novo vere nascebantur et homines, et pecora etiam obtulit. Sunt qui a Metio illo fœdifrago dictam portam velint, et quoniam ibi

torquebantur homines Romano populo invisam fuisse contendunt.” (Pauli Diaconi *Epitome Festi*.)

^z In the old map of Buffalini a foss is marked with the southern wall existing just outside the *Porta Chiusa*, the *Prætorian Camp* forming its north side. There are three letterings on it: one, the “*Vivariolum*” (implying a place where animals were kept for sacrifice); “*Sepulchrum commune*,” or common burial-place; and thirdly, “*Fossa in quam projiciebant ossa cadaverum ustorum*,” i.e. the foss into which they threw out the bones of the burnt bodies.

^a This goddess is mentioned by Horace:—“*Labra movet metuens audiri pulchra Laverna*.” (Horatii, *Epist.* xvi. lib. i. v. 60.)

leaves the Porta Nævia in the middle. In any case, the gate was probably rather a postern than a main gate of the city wall, as no important road seems to have passed through it, and no other author than Festus, so far as we are aware, mentions the gate.

(11.) Porta Minucia.—This is mentioned by Paulus Diaconus in the Epitome of Festus^b, and said to be named from a *sacellum*, near to it. It is to be noted that a statue was erected to P. Minutius, prefect of Annona, according to Pliny^c; or a gilt figure of an ox erected, according to Livy^d, in his honour outside of the Porta Trigemina, in acknowledgment of the service he had rendered to the Roman people in cheapening the price of corn. There is a Minucia mentioned also in the Regionaries, as if in the Campus Martius^e. The Porticus Minucia is also mentioned by Plautus. Whether the gate was in Regio XIII. or Regio IX., there seems no reason to consider it one of the gates in the line of fortification.

(12.) Porta Fenestella.—The authorities for this name are Ovid^f and Plutarch. Although apparently mythical at first sight, there seems to be reason for thinking that tradition had handed down to their time the name of an actual gate. Ovid only briefly refers to the legend of Fortuna entering the palace by a window (*fenestra*), whence the gate bears the name of Fenestella. Plutarch gives the legend in full. In the treatise *De Fortuna Romanorum*, he gives an account of the numerous temples dedicated to her, and says:—

“Servius Tullius, who more than any other king increased the power of the Roman people, and adorned the State, . . . courted Fortuna, and from her received in return his kingdom, so that it was supposed Fortuna frequently visited him, and entered his palace by a certain gate *which they now call Fenestella* ^g.”

In another treatise on Roman questions occurs the following:—

“*Why one of the gates of Rome was called Fenestella, for this signifies a window, near to which is what is called the ‘cella’ of Fortuna* ^h.” Whether it is that Servius,

^b “Minucia porta appellata est, eo quod proxima esset sacello Minuci.” (Paul. in Fest.)

^c “L. Minucius Augurinus qui Sp. Melium coarguerat, farris pretium in trinis nundinis ad assem redegit undecimus plebei tribunus : qua de causa statua ei extra portam Trigeminam a populo stipe collata statuta est.” (Plinii Nat. Hist., lib. xviii. c. 4.)

^d “L. Minucius bove aurato extra portam Trigeminam est donatus, ne plebe quidem invita, quia frumentum Mælianum, assibus in modius æstimatum, plebi divisit.” (Livii Hist., lib. iv. c. 16.)

^e Under Regio IX. the following

entry occurs in the *Curiosum Urbis* : “*Minuciam veterem et Frumentariam.*” In the *Notitia* this stands, “*Minucias duas, veterem et Frumentariam.*”

^f “*Nocte domum parva solita est intrare fenestra :*

Unde Fenestellæ nomina porta tenet.”

(Ovid. Fasti, lib. vi. l. 577.)

^g Plutarchi Moralia, De Fortuna Romanorum, cap. x.

^h The Greek runs literally, “*was called Thuris, which signifies Fenestra, near to which is what is called the Thalamus of Fortune.*” (Plutarchi Moralia, Quæstiones Romanæ, cap. xxxvi.)

being the most fortunate of kings, [was supposed to] derive his glory from the frequent visits of Fortuna through this window—or whether this is all fabulous—and that the name of the place has its origin from the circumstance that when the king, Tarquinius Priscus, was dead, Tanaquil, the wife of Servius, a virtuous and loyal lady, put out her head from this window to address the citizens, and so urged them that they elected Servius for their king.”

There being so many temples of Fortuna, they do not assist us in determining the site, but it seems clear that this gate must have been a postern to the palace on the Palatine, probably the same that is now called Porta Romana, near the Regia or Royal palace. It had therefore no place in the wall of Servius Tullius.

(13.) Porta Libitinensis, mentioned by Lampridiusⁱ, was a gate probably in front of the Temple of Libitina, a goddess who presided over funerals.

(14.) Porta Ferentina.—This gate is mentioned by Plutarch in the Life of Romulus, though it seems like a misreading^k.

“Indeed, after those murderers were given up and punished by both parties, their calamities visibly abated; and Romulus purified the city with lustrations, which (they tell us) are yet celebrated at the Porta Ferentina^l.”

In the gorge on the south side of the Cœlian, between S. Stefano Rotondo and S. Maria in Domnica, there is evidently a very ancient road in a foss-way belonging to the Primitive Fortifications. The two springs under the south-west corner of the Cœlian, supposed to have been those of the Camenæ and of Egeria, are very near this spot, and may very probably come from a source in the hill above, which has not been noticed, and may have been called the head of the water of Ferentinæ in the time of the Kings.

(15.) A gate near the “Columnæ Vipsanæ” is mentioned by Martial^m, but from the context it must be the Porta Capena.

(16.) Porta Agonensis is, as has already been said, considered by Festus to be the same as the Porta Collina.

ⁱ “Galea ejus bis per portam Libitinensem elata est.” (Æl. Lampridius, in Vita Commodi Antonini, c. 16.)

^k The passage in question refers to certain cities being made tributary to the “Ferentine Gate.” It could only

be understood as meaning the community of priests who dwelt there.

^l Plutarch’s Life of Romulus.

^m “Qua vicina pluit Vipsanis Porta Columnis.” (Martial, iv. 18.)

APPENDIX.

NOTE A. PORTA FLUMENTANA.

I. THE Porta Flumentana probably stood nearly midway between the two bridges, the Pons Palatinus, now called Ponte Rotto, and the bridge of Æmilius (?) from the island. A gateway fortress and *tête-du-pont* would here be necessary, and the castle of the Crescentii was probably built on the site of this ancient fortress. There would also naturally be an area or open place within such a fortress, which may have been called *Lucus Pætulinus*. Remains of the foss round such a fortress may be distinctly traced, though now for the most part turned into cellars under the modern houses. Some say that the Porta Flumentana is the one now called Porta del Popolo, in the outer *enceinte* at the north end. Some of the passages relating to this gate agree with that supposition.

NOTE B. PORTA CARMENTALIS.

II. THE Porta Carmentalis was near the church of S. Omobono, which is proved by the circumstance that in the Via della Consolazione (No. 106), a *cippus terminalis* is visible near this church, in an area or place made by order of the Senate, by the *Prætores Ærarii*, L. Calpurnius Piso, and M. Salvius, and by the inscription which is *in situ* :—

CALPVRNIVS . PISO .
M . SALLVIVS .
PR . AER .
AREAM . EX . S . C . A . PRIVATIS .
PVBLICA . PECVNIA .
REDEMP TAM . TERMINAVIT .

PAVLI . IIII . PONT . MAX .
IVSSV .

CVIVS . BENEFICIO .
MAIORVM . MONVMENTA .
SERVANTVR . VT .
ANTIQVVM . LOCVM .
INDICET . VBI . NVPER .
EFFOSSVS . FVERAT
ERECTVS . EST .

AN . SAL . M . D . LVI
AB . VRBE . CONDITA .
M . M . CCC . IX .

NOTE C. FORTIFICATION.

THERE are strong reasons to believe that the Tarquins and Servius Tullius erected a double *agger*, the inner one usually called the *agger* of Servius Tullius, and an outer one, or wall of *enceinte*; and that the two gates mentioned by Strabo and Frontinus were in this outer *agger*; the Porta Viminalis being the present Porta S. Lorenzo, and the Porta Esquilina the present Porta Maggiore. It seems impossible to reconcile the passages of Strabo and Frontinus with the inner line, the wall of the CITY proper, whereas they agree perfectly with the outer line (the Wall of ROME, as distinct from THE CITY) in all respects. Nearly all the aqueducts entered Rome at the Porta Maggiore; immediately within that gate are large reservoirs for the water brought by the Marcia, the Claudia, and the Anio Novus. An important branch of the Marcian goes to the Porta S. Lorenzo; it is chiefly underground in the old bank on which the wall of the Empire is built, but emerges above ground, and is carried for a short distance on an arcade now almost buried, close to the Porta S. Lorenzo. This exactly agrees with the account of Frontinus and Strabo.

NOTE D. PORT OF ROME.

JUST outside the gate is the Marmorata or quay for landing marble, still in use. This quay originally extended lower down the river, under the Emporium. Considerable remains, belonging to this, were excavated in 1866 and following years, on the bank of the Tiber, under one of the large vineyards of Prince Torlonia, in which the ruins of the Emporium also stand. On this spot two fine marble columns, with the name of Trajan upon them, were dug up a few years since, just where they had been landed, probably at the time of his death. Just within the gate is the Salt-wharf or Salaria, where salt is landed and warehoused; this wharf is near the upper end of the Port, which was bounded by a large iron chain across the river, probably to fasten the barges to, which in the rapid stream must have been very necessary. This great chain was carried upon large stone corbels strongly fixed in the cliffs on both sides of the river, those on the side of the city were in the tufa wall called the Pulchrum Littus of the Kings. Unfortunately in this part a medieval house has been built over it, and the corbels are either entirely destroyed, or covered over and concealed by the house. On the

opposite bank, at the upper end of the Ripa Grande, and immediately above the remains of the wooden bridge or Pons Sublicius, the corbels remain ; three of them are perfect, and are carved into gigantic lions' heads ⁿ of Etruscan character, which are probably of the time when the port was made ^o. The middle of the three corbels has holes sunk on each side of it, but not carried through, probably to let in a wooden pole on which to fix a chain or ropes on each side. In the outer corbels the hole is carried through, and is large enough to admit a man's arm, or a wooden pole. The corbels are of hard stone, about three feet square. The bank of the river just above the salt-works has always been called traditionally Porta Leone, although no one knew the origin of the name.

ⁿ They are often under water, and in the summer, when the water is low, had long been so covered with brushwood that they could not be seen from the opposite bank of the river. They were discovered by accident in February, 1866, by Mr. J. H. Parker, and his photographer, Mr. Simelli, while grop-

ing their way along the bank in search of a good point of view for the mouth of the Cloaca Maxima, nearly opposite to them. Mr. Simelli was obliged to cut away the brushwood to get a photograph of these corbels.

^o B.C. 195, A.U.C. 558 ; Livii Hist., xxxv. 10, 41.

HISTORICAL PHOTOGRAPHS OF THE PRIMITIVE FORTIFICATIONS OF ROME.

[*The numbers refer to Mr. Parker's Catalogue.*]

*Those marked with * are from drawings, valuable for historical purposes,
but not as photographs.*

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| <p>FIRST PERIOD, A.U.C. 1 to 30 (?),
B.C. 753—720 (?).</p> <p style="text-align: center;">THE PALATINE HILL.</p> <p>Plan and Sections of that Hill.</p> <p style="text-align: right;">95*, 96*, 97*</p> <p>Walls—General View of the north-west corner of the Hill, shewing the tufa Wall of Romulus(?) against the upper cliff, with walls of the Republic and of the Empire built up against it and upon it. 106</p> <p>— View of a portion of the tufa Wall separately, shewing the construction at the <i>north-west</i> corner. 105, 779</p> <p>— Another part of the same Wall, with Guard Chambers of a Palace of the Cæsars, and stairs built against it. 114</p> <p>— Remains of one of the unfinished Towers of Romulus(?) on the terrace at the north end. 1452</p> <p>— Remains of another of the unfinished Towers at the north end, shewing portions of the two side walls of tufa, with concrete wall of the Republic, and brickwork of the Empire built upon them. 1453</p> <p>— Portion of another tufa Wall at the <i>south-west</i> corner of the Arx or Citadel of Romulus(?) (<i>Roma Quadrata</i>), on the <i>northern</i> side of his great foss across the middle of the Palatine Hill. 2235</p> <p>— Another portion of the same Wall, afterwards used as the <i>podium</i> or base-ment of a temple ; it stands upon the tufa rock at the edge of the foss on the northern side of it. 2232</p> | <p>Walls—Fragment of the tufa Wall on the <i>southern</i> side of the foss, afterwards used to support the side of a sloping paved road of the time of the early Empire ; this wall is much decayed. 2295</p> <p>— View of the south-east angle of the Hill near the Colosseum, shewing the Scarped Cliff, with a Wall of the Cæsars built up against it. 117</p> <p style="text-align: center;">WALLS OF THE SAME PERIOD, FOR
COMPARISON.</p> <p>Tusculum — The Acropolis, Scarped Cliffs and Gate. 1897, 1898, 1899, 1900</p> <p>Alba Longa—Scarped Cliff with Wall. 1939*</p> <p>— Cave Reservoir of Water, under the Arx, with peculiar wells of conical shape. 1940*</p> <p>— Similar Reservoir on the Palatine. 366*</p> <p>Gabii—Scarped Cliffs with Wall, and with the Modern Village, shewing the character of the Primitive habitations. 1582</p> <p>Volterra—Etruscan Walls (under Santa Chiara). 2394, 2395</p> <p>SECOND PERIOD, A.U.C. 30—60(?).</p> <p>WALL ENCLOSING THE PALATINE AND THE HILL OF SATURN IN ONE CITY. (Dionysius, lib. i. c. 66.)</p> <p>Plan and Sections of the Hill of Saturn, afterwards the Capitol. 119*</p> <p>View of the Tarpeian Rock. 120</p> <p>Plan—Shewing the site of remains of the wall extending from the north-east corner of the Hill of Saturn (<i>then</i></p> |
|--|---|

made the Capitol), part of it used to enclose the Forum of Augustus. 2962*
Excavations in the Via di Marforio, 1872, at the point of junction of the wall with the rock of the hill of Saturn. 2963*

Tufa Wall of the Kings on the Eastern side of the Forum of Augustus. 881

— Section of the same Wall (now behind the houses), 50 ft. high and 12 ft. thick, with another Wall, a third of the height and thickness, inserted in it at a right angle. The latter wall is of travertine, and was the partition between the Forum of Augustus and the Forum Transitorium of Nerva. 844

Tufa Wall on the south side of the Forum Transitorium, behind the Marble Columns of the Temple of Pallas, which are built up against it, (this wall continues under the houses as far as the Tor de' Conti). 847

Tufa Wall on the west side of the Palatine, at a low level (now in a garden behind the houses). 98, 667*

Walls of Towers (now under the church of S. Anastasia), at the same low level (miscalled the Pulvinar of the Circus Maximus).

748 from nature, 100*, 102*

Tufa Wall on the bank of the Tiber, called the Pulchrum Littus.

159, 157*, 1171

THE AVENTINE HILL.

Scarped Cliffs—I. On the western side, with early wall (and the palace of the Savelli built upon it). 134

— 2. At Western corner, supported by tufa wall. 139

— 3. (Under S. Balbina) on the southern part, with tufa wall built against it (now concealed). 144, 802

Wall of the Latins (?) (near S. Prisca), with an arch inserted in the time of Camillus (?). 141, 749, 790

Ancient Fort under S. Sabba. 143

THE CÆLIAN OR CÆLIAN HILL.

Plan and Sections, by Ernest di Mauro. 2964*

88*

Scarped Cliffs, north-east angle of the Arx of the Cœlian fortress, afterwards the Claudium, near the Colosseum.

123

Scarped Cliffs at the southern angle of the Arx, the Promontory under the Villa Mattei. 124

— North-east Promontory, under the Monastery of the IV. Santi Coronati.

133

QUIRINAL, VIMINAL, AND ESQUILINE.

VIMINAL—Plan. 149*

— Section. 148*

— Tufa Wall against the Western Cliff of the Arx (opposite to S. Vitale).

150

ESQUILINE—Fort at the south-east angle, an arcade of the Early Empire built against a tufa wall. 147

QUIRINAL—Tufa Wall against the Cliff in the Colonna Gardens. 2113

THE GREAT AGGER OF SERVIUS TULLIUS.

Plan of the Horn-work at the north-east corner, afterwards in the Garden of Sallust. 842*

Ancient Cliff at the west end of the Horn-work. 154

Tufa Wall against this Cliff, at the west end. 1024

Arcade built against the north end. 153
Plan and Section of part of the Agger (near the Railway Station in 1868).

885*

West or Inner side of the Agger. 152

Section of the Agger and Wall. 151

THE SMALLER AGGERES OF SERVIUS TULLIUS.

1. From the southern cliff of the Esquiline to the northern cliff of the Cœlian (passing under the altar of the church of S. Clement), Wall in that part. 1263

2. From the south-west cliff of the Cœlian to the north-east cliff of the Aventine, (in this short *agger* the

Porta Capena was under the cliff of the Coelian, and the Piscina Publica under that of the Aventine). Plan and Section of that valley, 632*. Interior of a tower of the Porta Capena, with the Aqua Marcia carried through it (and upon the arch of the gate). 710*

Views in the Pits dug in 1869 on the line of this *agger*, with remains of the Aqueducts upon it. 1164,

1165, 1166, 1244, 2221, 2222

Plans and Sections of this short *agger*. 1138*,

1139*, 1140*, 1141*, 1142*

There are remains of another short *agger* between the southern part of the Aventine (called the Pseudo-Aventine) and the northern part of

that hill, which extends to the Tiber ; and the cliffs of that hill, with the wall upon them (Nos. 140, 141, 790), forming part of the defence of the third City, or the City of Servius Tullius, on that side as far as the hill extended. The great tufa wall on the bank of the Tiber, called the Pulchrum Littus, was then the defence as far as the island. Another tufa wall, with a great foss in front of it, was then carried across from the bridge to the western side of the Hill of Saturn, afterwards the Capitol, the northern side of which was part of the defences of the second City. This foss can be traced through the Ghetto and the fish-market, and part of the tufa wall on the bank of it remains under the Church of S. Angelo in Pescheria.

SECOND APPENDIX TO PRIMITIVE FORTIFICATIONS.

THE LUPERCAL OF AUGUSTUS, THE CAVE OF PICUS AND FAUNUS(?), AND OF CACUS(?), AND THE MAMERTINE PRISON.

NOTICE.

THE exact sites of the Lupercal or Wolf's Cave, the cave of Picus and Faunus, or Cacus(?) (used as the mouth of the aqueducts), and of the great Prison of the Kings of Rome, have all been ascertained within the last few years, and the *construction* is an important part of the evidence by which they are established. It seems, therefore, expedient to add them to this chapter, instead of waiting for the publication of the other parts of this work on the topographical arrangement in the *Regiones*, which must be delayed until the important excavations of the Forum Romanum, now going on, are completed, at least as far as to ascertain all the main points, a great deal of which has already been done.

The substance of these discoveries was given in a Lecture to the British Archæological Society of Rome, and printed for them in 1869, but this pamphlet has been out of print for some time, and the information is therefore not accessible, and the subject forms a necessary part of the present work. In the account of these I have had much assistance from Dr. Fabio Gori, who was in my employ for some years in directing the excavations, and drawing up an account of them. He was well acquainted with the records of excavations previously made in searching for statues, &c., of which memoirs were preserved by eye-witnesses, chiefly Flaminius Vacca, and which were collected and published by Fea in a volume called "*Miscellanea*," now difficult to obtain. I was not acquainted with this volume until afterwards. Dr. Gori also knew how to get access to the cellars and to the vineyards, which a stranger cannot do, and it was not until I had been in Rome several seasons that I understood how these things are managed. The relative position

of Dr. Gori and myself is very much the same as that of Dr. Nibby and Sir William Gell fifty years ago, when the original work on the Campagna of Rome, as written in Italian by Dr. Nibby, but at the suggestion, and at the expense of Sir W. Gell, was published in full in Italian in three volumes in Rome, under the name of Dr. Nibby, while the English translation and abridgment of it was published in London, under the name of Sir William Gell. I might have adopted the same plan, but I have thought it preferable to put both names to it: we have worked together cordially, and it is often difficult to say to which of us any particular part belongs. In the case of the Mamertine Prison especially: we descended into the cellar together for the first time at my request, and there saw the tufa walls of the style usual in the time of the Kings of Rome, which led us to the conclusion that it must be part of the great Mamertine Prison. He was employed to examine the subterranean passage in 1867-68, and published an account of his explorations in a Roman Journal called *Il Buonarrotti*, and a few copies were printed separately. He gave an interesting and curious account of his adventures, in searching into this tunnel in company with his friend Signor de Mauro, an engineer, who made an excellent plan of the prison and the tunnel.

THE LUPERCAL.

AT the north-west corner of the Palatine Hill, near the church of S. Anastasia, and at the corner of the Via de' Cerchi and the Via de' Fienili, is a subterranean cave-reservoir, partly natural and partly built. It is covered by a vault faced with stucco, which has been richly ornamented, but a considerable part of this stucco has fallen down, owing to the vibration produced by the carriages in the Via de' Cerchi, a modern road which passes over it.

A part of this cave was under, or very near to, one corner of the Circus Maximus, near the Carceres. In this cave streams of pure and fine water gush out of the rock in great abundance, and are collected in a *specus*, which conveys them to near the church of S. Giorgio in Velabro and the Janus Quadrifrons, where it falls into the Cloaca Maxima, and so into the Tiber. This stream is called Acqua Argentina; the water is celebrated for its purity and for its medicinal qualities, which in the Middle Ages were considered as miraculous, as mentioned in the history of this church.

The name is supposed by some to be derived from the pure and silvery appearance of the water, by others from the circumstance that it ran through the Silversmiths' quarter, as is shewn by the inscription on the arch dedicated to Septimius Severus by the side of the church, and near the mouth of this stream.

The present entrance to this cave is down a well at the corner of the Via de' Cerchi and Via de' Fienili, and it is now used as a mill-head for a modern mill between the source and the mouth; from which cause, and from the falling down of masses of the stucco of the vault which obstruct the course of the water and cannot easily be removed, it is often knee-deep in water.

The situation of this cave agrees so exactly with the full description of the Lupercal given by Dionysius of Halicarnassus, and the casual notices of it by other classical authors, that it seems almost impossible to dispute its identity. Without pretending to discuss the question of the truth of the legend of the wolf and the children, it is sufficient to say that this is the cave rebuilt by Augustus, and in which the priests of Pan bathed themselves before rushing into the circus for the Lupercal games. Dionysius, writing about the antiquities of Rome during the time of the Arcadians and their

king Evander, before the arrival of Æneas into Italy, gives the following account of the Lupercal.

“But some have written, of whom Polybius the Megalopolitan is one, that it [the Palatine Hill] was called so from a young man named Palas^a who died there; that he was the son of Hercules by Dyna, the daughter of Evander; and that his grandfather by the mother’s side, having raised a monument for him on the hill, called the place Palantium from this youth. But I have never seen any monument of Palas at Rome, neither could I hear of any sacrifices, or anything of that nature, performed in memory of him; although this family is not unremembered, or without those honours with which divine natures are worshipped by men: for I find that public sacrifices are performed yearly by the Romans, to Evander and Carmenta, in the same manner as to the other heroes and geniuses; and I have seen two altars raised; one to Carmenta, under the Capitoline Hill, near the Carmental Gate; and the other to Evander, at the foot of another hill, called the Aventine Hill, not far from the Porta Trigemina. But I know of nothing of this kind done in honour of Palas. The Arcadians, therefore, being settled altogether under the hill, planned houses according to the manner of their country, and also built temples. And, first, they erected a temple to the Lycaen Pan, by the direction of Themis: for among the Arcadians Pan is the most ancient and the most honoured of all the gods: here they found a proper place for this purpose, *which the Romans call the Lupercal*, we should call it *Λυκαίων, Lycæum*: but the ground about the temple being now all built upon, the ancient disposition of the place is not easy to be guessed at^b. However, there was, as it is said, formerly a vast cavern under the hill, covered with a grove of spreading oaks; deep fountains issued from the foot of the rocks, and the valley adjoining to the precipices was shaded with thick and stately trees. In this place they raised an altar to this god, and performed a sacrifice according to the custom of their country, which the Romans offer up to this day in the month of February, after the winter solstice, without altering anything in the rites then performed. The manner of this sacrifice will be related afterwards: upon the top of this hill they set apart a piece of ground, which they dedicated to Victory, and instituted annual sacrifices to be offered up to her also, which the Romans perform, even in my time^c.”

“But concerning her children, Quinctus Fabius, called Pictor, whom Lucius Cincius, Cato Porcius, Calpurnius Piso, and the greatest part of the other historians have followed, writes thus: ‘That, by the order of Amulius, some of the king’s officers took the children in a cradle, and carried them to the river, distant from the city about a hundred and twenty stadia, with a design to throw them

^a More probably from the Palæ or Palisades with which it was originally fortified, before the wall was built against the cliffs.

^b The demolition of these buildings, and those subsequently built on the same spot, has brought to light the Walls of the Kings, built against the cliffs, and used as foundations for all the later buildings. The present entrance to this cave is down a well fifteen feet deep, but it is not much below

the level of the paved street called after Julius Cæsar, on the eastern side of the Circus Maximus, to the south of this cave, and the continuation of the same street under the Janus Quadrifrons, on the north of it, is at the same level. If the excavations of the street now under the church of S. Anastasia, was continued a few yards to the north, it would arrive at the mouth of this cave.

^c Dionysius, translated by Spelman, vol. i. bk. i. ch. 32, pp. 70—73.

into it. When they drew near, and perceived that the Tiber, swelled by continual rains, had exceeded its natural bed and overflowed the plains, they came down from the top of the Palatine Hill to that part of the water that lay nearest (for they could advance no further), and set down the cradle upon the flood, where it washed the foot of the hill : the cradle floated for some time ; then, as the waters retired by degrees from the utmost verge, striking against a stone, it overturned and threw out the children, who lay crying and wallowing in the mud. Upon this a she-wolf that had just whelped appeared, and, her teats being distended with milk, gave them her paps to suck, and with her tongue licked off the mud with which they were besmeared. In the meantime, some shepherds happened to be driving their flocks to pasture (for the place was now become passable), and one of them, seeing the wolf thus cherishing the children, was for some time struck dumb with astonishment and disbelief of what he saw. For there was not far off a holy place, covered with a thick wood, and a hollow rock from whence springs issued : this wood was said to be consecrated to Pan, and there was an altar dedicated to that god : when she came to this place she hid herself. This grove is no longer extant, *but the cave from whence the fountain flows is contiguous to the Palatine buildings, and to be seen in the way that leads to the circus, and near it stands a temple in which a statue is placed representing this incident ; It is a wolf suckling two children, they are in brass (or bronze), and of ancient workmanship ;* this place is said to have been consecrated by the Arcadians, who, with Evander, formerly built their habitations there. As soon as the wolf was gone, the shepherds took up the children, and, as the gods seemed to interest themselves in their preservation, were very desirous to bring them up. There was among them an overseer of the king's swineherds whose name was Faustulus, a man of humanity, who had been in town upon some necessary business at the time when the deflowering of Ilia and her delivery were made public ; and after that, when the children were carrying to the river, he, going to Palantium, by divine appointment, went the same road with those who were carrying them ; this man, without giving the least notice to the rest that he knew anything of the affair, desired the children might be delivered to him, and having received them by general consent, he carried them home to his wife, where, finding her just brought to bed, and grieving that the child was dead, he comforted her, and gave her these children to substitute in its room, informing her, from the beginning, of all the circumstances relating to them. And as they grew up he gave to one the name of Romulus, and to the other that of Remus. When they came to be men, they shewed themselves, both in dignity and aspect and elevation of mind, not like swineherds and neatherds, but such as we might suppose those to be who are born of royal race and looked upon as the offspring of the gods, and as such they are still celebrated by the Romans in the hymns of their country. But their life was that of herdsmen ; they lived by their own labour, and generally on the mountains *in cottages of one story, which they built with wood and reeds*^d, of which one called the cottage of Romulus remains even to this day, *in the corner as you turn from the Palatine Hill to the Circus*, which is preserved holy by those to whom the care of these things is committed, who add to it no ornament to render it more august ; but if any part of it is injured either by storms or time they repair that injury, and observe to restore it as near as possible to its former condition. When Romulus and

^d Similar huts are still inhabited by the Italian peasants, as may be seen in the village among the ruins of Gabii.

Remus were about eighteen years of age they had some dispute about the pasture with Numitor's herdsmen, *whose oxen were stationed on the Aventine Hill, which is opposite to the Palatine Hill*^e. They frequently accused one another either of feeding those pastures that did not belong to them, or of appropriating to themselves those that were common, or anything else that offered itself. From this altercation they had recourse sometimes to blows and then to arms. Numitor's men having received many wounds from the youths, and lost some of their people, and being now driven by force from the places in contest, they formed a stratagem against them, and having placed an ambuscade in the hidden part of the valley, and concerted the time of the attack with those who lay in wait for the youths, the rest in a body assaulted their folds. It happened that Romulus at that time was gone to a place called Cænina together with the chief men of the village, to offer sacrifices for the public, according to the custom of the country; but Remus, being informed of their coming, armed himself in all haste, and with a few of the villagers who had first got together, went out to oppose them: but they, instead of receiving him, retired, in order to draw him to the place where, by facing about, they might attack him with advantage: Remus, being unacquainted with stratagem, pursued them a great way till he passed the place where the rest lay in ambush, who upon that rose up, and at the same time the others who had fled faced about, and having surrounded them, they overwhelmed them with stones, and took them prisoners, for they had received orders from their masters to bring the youths to them alive. Thus Remus was taken, and carried away.^f”

All this period of history is so remote and the evidence so slight, that no importance can be attached to it, more than to an historical romance; but that this history was believed by the Romans in the time of Augustus seems clear, because Dionysius himself and other well-known authors were living at that time, and although Livy suggests another and more probable explanation of the story of the wolf (*lupa*), yet he does so in such a manner as to shew that he is rather afraid of offending the prejudices and the popular belief of the Roman people.

In the well-known inscription called Ancyrana of the time of Augustus, put up in the name of that Emperor, he says, “I made the Lupercal^g.” Virgil mentions the cave of the Lupercal as being cool from its situation under the rock^h, and Servius, in his Com-

^e This shews that the Aventine was then required as pasture-ground for the inhabitants of the Palatine, according to the custom of that period, when every city consisted of three parts: 1. The arx or citadel; 2. The town; 3. The pasture-ground.

^f Dionysius, *Antiquities*, by Spelman, vol. i. bk. i. ch. 79, pp. 181—187.

^g LUPERCAL... FECI. Vide Mommsen *Res Gestæ Divi Augusti ex Monumentis Ancyranis et Apolloniensi*. Berolini, 1855, p. xlvi. cap. 19.

^h “. . . gelida monstrat sub rupe Lupercal.

Parrhasio dictum Panos de more Lycaei.”

(Virg. *Æn.*, lib. viii. 343, 344.)

mentary on this passage, says that the Lupercal was in the Circus Maximusⁱ.

The cave is divided into two portions, one thirty-seven yards long the other thirty-six, each rather more than two yards wide. The *specus* is raised about a yard from the ground, and the course is cleared for the water from time to time by the *Aquarii*, or watermen. The ground has been filled up and raised considerably by the masses of stucco from the vault that have fallen. The water gushes out violently from the rock, as if it had been confined and let loose here, and it is not at all improbable that it is the same stream which descends first from the Cœlian into the valley between that and the Aventine, and then runs under the Palatine, and finds an exit here, following the same direction as the Marrana, but at a considerably lower level^j.

The small channels in the cave are collected into one larger *specus*, which now forms the mill-stream, and runs into the Cloaca Maxima near the church of S. Giorgio in Velabro. During the barbarous period of medieval history the present street, called Via de' Cerchi, was made and was carried over the cave; the old street at a lower level was buried, and was only discovered a few years since in the excavations made by the Cardinal Macchi, a part of which is now visible under the church of S. Anastasia.

The cave has originally been richly ornamented, as is shewn by the stucco vault and a niche faced with *Opus reticulatum* in the north-east gallery opposite to a doorway of fine brickwork^k. The rock has been cut at an early period, which *may* have been done by the Arcadians. Pausanias says^l that at that period there were numerous caves near the sea dedicated to the gods and used as temples, and he describes one of a round form as dedicated to Pan. This cave was probably the one here dedicated to Pan; it was not actually under the Circus, but so close to it as to be naturally called *in* the Circus.

The sacred grove of trees with which it is known that this part of Rome was covered in early time, has long since disappeared,

ⁱ Servii Comment. ad lib. viii. 90, 98, 343.

^j There is another stream or spring at the same low level on the other side of the Palatine, which was seen in an excavation some years since, in front of the gate of the Farnese Gardens, and which now runs down into the Cloaca Maxima in the Forum Romanum, but originally formed a lake or

a bog near the present church of S. Maria Liberatrice, evidently the Lake of Juturna, and the gulf of Curtius.

^k See a description of the cave by Signor Fabio Gori, in the "Bullettino dell' Istituto di Corrispondenza Archeologica," May, 1867.

^l Pausanias, Descriptio Græciæ, lib. x. c. 32.

but the situation near these water-springs seems a very natural one for the celebrated fig-tree (*Ficus Ruminalis*) under which the wolf was supposed to have nourished the new-born infants. An ancient bronze sculpture representing the event is mentioned by Livy^m as placed here when an altar was dedicated by the two Ogulnii, then Curules Ædiles, in the year of Rome 456 (B.C. 296). This bronze wolf is perhaps the one now in the Museum called of the Conservatori on the Capitol, before mentioned, and a bronze statue of Hercules found with it in the time of Vaccaⁿ is now in the Capitoline Museum, on the opposite side of the square to the other part of the Museum, called of the Conservatori. Other persons^o, who received their information from those living at the time when the bronze objects were found, attest that they were found in a temple between the Scuola Greca (at S. Maria in Cosmedin, where is the Bocca della Verità), and near the Circus, in the time of Sixtus IV. (A.D. 1471—1484), with many other antiquities. Dionysius, in the passage already cited, says that this bronze group of the wolf and the infants was worshipped in a small temple near the Lupercal, and for this reason Fulvius did not hesitate to say that the image then found was the one dedicated by the Ædiles Ogulnii at the Ficus Ruminalis.

The most curious circumstance about this is that the wolf is of decidedly Etruscan workmanship, and a very good piece of bronze work of the usual stiff Etruscan character : the two infants are not at all of Etruscan character, but comparatively modern, evidently an addition to the original bronze wolf, and are by no means bad workmanship, but the easy flowing lines of the children do not agree with the stiff character of the wolf.

In one of the excavations made in 1868 we found two doorways opening towards the Forum Boarium, near the small subterranean street a portion of which may be seen in the excavations under the church of S. Anastasia, and which originally passed by the side of the Circus Maximus, and was the road to it from the Janus Quadri-
frons, which Signor Fontana, the architect employed there, stated that he has traced close to the cave going in that direction. These brick doorways are much covered with the lime deposit and concealed by pieces of terra-cotta and marble, and the earth brought here from the excavations made at the Pantheon in the time of

^m Eodem anno.

ⁿ Flaminius Vacca Memorie, No. 3.

^o Julius Pomponius Letus, de Rom.

Antiq., p. 24 ; Marliani, Antiquæ Romæ Topographia, lib. iv. p. 78 ; Fulvius, de Urbis Antiq., p. 229.

Crescimbeni^p, and in the Forum Romanum under Pius VII. (A.D. 1800—1823). These doorways have arches; they are 4 ft. 6 in. wide, and on the same height at present, the lower part being filled up to that level.

Before completing this account of the Lupercal, it should be mentioned that Dionysius and Plutarch describe the Lupercal games, and say that in their time the Roman nobles, the senators, and the consuls took part in them, such as Mark Antony, who performed the sacrifice in the Lupercal stripped naked, and then wrapping the skin of the animal sacrificed round his loins, he ran like mad through the adjacent streets, striking every one that he met, even ladies, who were often well pleased to be struck because this was supposed to give fertility^q.

“Antony, without intending it, gave Brutus and Cassius a pretence for their undertaking (the murder of Julius Cæsar). When the Romans were celebrating the *Lupercalia*, Cæsar in a triumphal habit sat on the rostrum to see the race. Upon this occasion many of the young nobility and the magistracy, anointed with oil and having white things in their hands, run about and strike as in sport every one whom they meet. Antony was one of the number, but did not regard the usual ceremonies of the institution^r,” &c.

^p Crescimbeni, *Stato della Basilica di S. Maria in Cosmedin*, pp. 8—17. Unfortunately the Pontifical workmen long continued the same cheap but detestable system, of filling-up the ancient subterranean chambers with the earth dug out in searching for statues. In this manner the remarkable series

of chambers and passages under the *Thermæ* of Caracalla have been entirely choked up with earth within the last few years, that is, between 1850 and 1870.

^q Dionysius, lib. i. c. 80.

^r Plutarch, in the *Life of Mark Antony*, pp. 187, 188.

THE CAVE AND SPRINGS OF PICUS AND FAUNUS—AND OF CACUS (?).

AMONG the most remarkable objects in the thirteenth Regio of Rome enumerated by Nardini in his additions to the Catalogue of the Regionaries of the fourth century, is the cave and fountain of Picus and Faunus. We might well doubt the authority of these additions if they were not so well supported by passages in the classical authors. Plutarch^s, in his life of Numa Pompilius, tells an amusing story of the interview between Numa and the gods :—

“Nothing can be imagined more absurd, than what is related about his conversation with Jupiter. It is said, that when Mount Aventine was yet without the walls and uninhabited, abounding with flowing springs and shady groves, it was frequented by two demi-gods, Picus and Faunus. These, in other respects, were like the Satyrs, or the race of the Titans ; but in the wonderful feats which they performed by their skill in pharmacy and magic, more resembled the Idæi Dactyli, as the Greeks call them (among whom was Orpheus), and thus provided they roamed about Italy. Numa, they tell us, having mixed the fountain of which they used to drink with wine and honey, surprised and caught them. Upon this they turned themselves into many forms, and quitting their natural figure, assumed strange and horrible appearances. But when they found they were held, they acquainted him with many secrets of futurity, and taught him a lustration for thunder and lightning, composed of onions, hair, and pilchards, which is in use to this day. Others say, these demi-gods did not communicate the lustration, but that by the force of magic they brought down Jupiter from heaven. The god, resenting this at Numa’s hands, ordered ‘the charm to consist of heads ;’ ‘of onions,’ replied Numa ; ‘human hairs,’ said Numa, desirous to fence against the dreadful injunction, and interrupting the god ; ‘living,’ said Jupiter ; ‘pilchards,’ said Numa. He was instructed (it seems) by Egeria how to manage the matter. Jupiter went away propitious (in Greek, *ileos*), whence the place was called Illicium ; and so the charm was effected. These things, fabulous and ridiculous as they are, demonstrate how superstition, confirmed by custom, operated upon the minds of the people. As for Numa himself, he placed his confidence so entirely in the Deity, that when one brought him word the enemy was coming, he only smiled, saying, ‘And I am sacrificing.’”

Virgil^t gives rather a different version of the story. He calls Picus a king of Latium, son of Saturn, and the father of Faunus. Faunus is represented as a man with the feet of a goat. We are all well-acquainted with the celebrated statue of Faunus, or the

^s Plutarch, Numa.

^t Virg. *Æn.*, lib. viii.

Faun. Ovid gives ^u a vivid description of the groves on the Aventine, its caves and its water-springs, in the fable of the interview between King Numa and Jupiter, the king being assisted by Picus and Faunus, whom he had caught napping, and imprisoned to make them assist him.

We have nothing to do with the origin of these poetical fabulous legends ; it is sufficient for our purposes to point out that in all probability these writers of the first century knew of the existence of a cave under the Aventine with a spring of pure water in it, to which they applied the story, and that cave still exists, and is the only one on the Aventine Hill that has a natural spring of water in it, so that to this it must apply.

This cave is situated between the Marmorata, or landing-place for marble, and the Salinæ, or landing-place for salt, immediately under the Priorato, and a little to the west of S. Sabina. It has all the appearance of being the mouth of the aqueducts, and not less than five *specus* have opened into it, one of which still has some water running through it and in use. By a careful exploration and sending a man up this *specus*, we found that after proceeding some distance into the hill it comes to an end in a large cave reservoir, in which there is a fine natural spring of water, but there is no aqueduct passing through it, and this is the water now in use. Two of the other branches or *specus* can only be traced for a few yards, and have long been dry. This cave was used as a reservoir for the aqueducts, but it is a natural cave, and was in use long before the aqueducts were made. Trajan's aqueduct was traced in 1855 ^v to another mouth under S. Sabina, about fifty yards to the north of this cave, but at a much higher level ; it is in the garden of S. Sabina, and the entrance to it has been built up because it was considered dangerous. The surplus water from that appears to have been

^u "Lucus Aventino suberat, niger ilicis
umbra,
Quo posses viso dicere, Numen inest.
In medio gramen, muscoque adoperta
virenti
Manabat saxo vena perennis aquæ.
Inde fere soli Faunus Picusque bibebant.
Huc venit, et fonti rex Numa mactat
ovem.
Plenaque odorati disponit pocula Bacchi ;
Cumque suis antro conditus ipse latet
Ad solitos veniunt silvestria numina
fontes :
Et relevant multo pectora sicca mero.
Vina quies sequitur : gelido Numa pro-
dit ab antro,

Vinclaque sopitis addit in arcta
manus.
Somnus ut abscessit, pugnando vincula
tentant
Rumpere : pugnant fortius illa tenent.
Tunc Numa, Di nemorum, factis ignos-
cite nostris,
Si scelus ingenis scitio abesse meo."
(Ovidii Fasti, lib. iii. 295—310.)

^v See "Mémoire sur les Fouilles ex-
écutées à Santa Sabina (1855—1857),"
par M. Descemet, Correspondant de
l'Institut Archéologique de Rome. From
the "Mémoires de l'Institut." 4to.,
Paris, 1857, with Plan and Section.

carried off by a vertical pipe of terra-cotta, which descends into the lower cave near the entrance. There can be no doubt that the lower cave was used for the mouth of the Aqua Appia, being close to the Porta Trigemina. A large *specus*, coming from the south into our cave, was built up with solid masonry, and we were not at first permitted to open it; but it has since been opened, and was the *specus* of the Aqua Appia, and this cave was the reservoir at the mouth of it. Such was the opinion of Piranesi, who gives a view of the cliff at the entrance of this cave, and calls it the mouth of the Appian Aqueduct. He also makes the clay soil in this cave his base line for measuring the height of the other aqueducts, the Appia having been the lowest, according to Frontinus.

The situation of this cave also agrees with that of the Cave of Cacus, which is mentioned by Solinus^x, as being at the Salaria. This cave is very near that place, which is well known, and still called by that name; it is the salt-wharf, where salt is landed, having been brought up the Tiber from the salt-pits at Ostia, which is as old as the time of the Kings. There is no other cave on the Aventine, and the same cave that was afterwards used for the mouth of the aqueducts may have been called the Cave of Cacus, as it well fits that legend, and also called the Cave of Picus and Faunus; the natural reservoir of water in it agrees with all these legends. Remains of the Porta Trigemina have also been found on the same wharf. Frontinus mentions^y that the mouth of the great aqueduct called the Appia was at the Porta Trigemina and the Salaria.

^x "Qui Cacus abitavit locum, cui Salinæ nomen est, ubi Trigemina nunc portæ." (Solinus, lib. i. c. 8.)

^y Frontinus de Aquæductibus, c. 5, et 22. See our chapter on the Aqueducts.

THE MAMERTINE PRISON.

THE great prison of the Kings of Rome, popularly called the Mamertine Prison, is among the earliest and most interesting structures of this most interesting and most celebrated capital of the world. It had long appeared to us that the two small chambers under the Church of the Crucifixion could not possibly have been the whole of this great prison, the only prison of ancient Rome, in which large numbers of prisoners were confined on certain occasions. Nor was it probable that a large and important building of that early period would be entirely destroyed even to the foundations, as was commonly said.

The fine arches of tufa, with the springing-stones of travertine in the small court called Vicolo del Ghettairello, called by Canina the Forum of Julius Cæsar, are evidently part of some important ancient building; they have not at all the character of the shops round a Forum, such as those still remaining in a ruined state behind the houses on the eastern side of the Forum of Trajan. It is true that the situation agrees with Canina's theory, they are at the foot of the Capitol under the eastern cliff, and opposite to the wall of Augustus on the western side of the Forum of the Cæsars, *but they were not shops*^z. The arches are of tufa, in large blocks, in the style of the Kings of the third period, the time of Servius Tullius, but have been used again when the upper part was rebuilt in the time of Tiberius. These are over the eastern wall of a series of large chambers 40 ft. long by 14 ft. wide, which can only be part of the original Prison of the Kings; the Via di Marforio now separates them from the other part of the prison (called the Prison of S. Peter), long exhibited as the whole of it, consisting of two small chambers. In the lower chamber is an ancient arch or doorway, long blocked up with rubble walling, apparently medieval. This arch opened into one end of a subterranean passage^a leading towards the large chambers before mentioned.

^z I had long wished and endeavoured, in 1865 and 1866, to get into the cellars under these arches, but never could succeed in doing so until I obtained the assistance of Signor Fabio Gori, who found the key for me the day after he was applied to.

^a The part of the subterranean passage near the church had long been turned into a drain by the blocking-up of the old drain under it, and when the arch was first opened the smell from it was so bad that the priests and people were quite driven out of the church above. But

The name of this prison is derived by some from a temple of Mars, by others from the name of the king Ancus Martius. According to Festus^b, Mars was sometimes called Mamers, Mamertes, or Mamertus. It was originally built by King Ancus Martius, as stated by Livy^c, and enlarged by Servius Tullius, who added what was called the Robur Tullianum, the underground chambers for the more dangerous malefactors, as mentioned by Lucretius^d, and Varro^e, and Festus^f.

These underground chambers were also called *Latomia* or *Lautumia*^g; the latter is only an old mode of spelling the same word, which signifies stone quarries, and it is probable that these chambers

after a short time Signor Gori and his friend Signor de Mauro, the engineer who assisted him, succeeded in getting the obstruction removed from the old drain under the passage, and the opening was closed by an iron door to keep out the smell. The British Archæological Society of Rome had thus done as much as they could afford, and sufficient for the strictly archæological purpose of indicating what was there and what might be done.

^b "Mamercus prænomen Oscum est ab eo, quod hi Martem Mamertem appellant." (Festus in v., p. 130, edit. Mueller.)

"Tullianum, quod dicitur pars quædam carceris, Ser. Tullium regem ædificasse aiunt." (Festus, p. 356.)

"Robur quoque in carcere dicitur in locus, quo præcipitatur maleficorum genus, quod ante arcis robusteis includebatur." (Festus, p. 264.)

"Curia locus est, ubi publicas curas gerebant . . . iisque curiis singulis nomina Curiarum virginum imposita esse dicuntur, quas virgines quondam Romani de Sabinis rapuerunt." (Festus in v., p. 49.)

This mention of the rape of the Sabine women in connection with this *curia*, or law-court, seems to agree remarkably with the first *curia* having been in the Capitolium, the great public building erected for the united city immediately after that event, or perhaps over these subterranean chambers of the prison.

^c "Ingenti incremento rebus auctis, quum in tanta multitudine hominum, discrimine recte an perperam facti confuso, facinora clandestina fierent, carcer ad terrorem increscentis audaciæ, media Urbe, imminens Foro ædificatur." (Livii

Hist., i. 33.)

"In order to suppress by terror the boldness which the vicious assumed from hence, and which gained ground continually, a prison was built in the middle of the city adjoining the Forum: and not only the city, but the territory also and boundaries of the state, were extended by this king." (Livy, bk. i. c. xxxiii.)

^d "Carcer et horribilis de saxo jactu deorsum,

Verbera, carnifices, robur, pix, lammina, tædæ."

(Lucretius, lib. iii. 1016, 17.)

^e "Carcer a coercendo, quod exire prohibentur. In hoc pars quæ sub terra, *Tullianum*, ideo quod additum a Tullio rege. Quod Syracusis, ubi (simili) de causa custodiuntur vocantur *Latomia*, et de *Lautumia* translatus, quod hic quoque in eo loco lapidicinæ fuerunt." (Ter. Varro de Lingua Lat., v. 32.)

^f Festus in v. Tullianum et Robur.

^g "Per eosdem dies principes Ætolorum tres et quadraginta, inter quos Damocritus et frater ejus erant, ab duabus cohortibus missis a M. Acilio, Romanam deducti, et in *Lautumias conjecti sunt*." (Livii Hist., iv. xxxvii. 3.)

"About this time forty-three of the principal Ætolians, among whom were Damocritus and his brother, were brought to Rome by two cohorts, sent by Manius Acilius, and were thrown into the prison called *Lautumia*, or the quarry." (Livy, bk. xxxvii. c. iii.)

"Lentulus, who had been consul, and was then in his second prætorship, Cethegus, and several others of great note, were, by the consul's order, under the authority of the senate, put to death in prison." (Velleius Paterculus, bk. ii. c. xxxiv.)

were made originally in the old quarries of the tufa, which had been dug out of the hill to build the walls. These were the "condemned cells" of the prison, that is, the cells for those condemned to death, as in a modern prison. Perhaps a better idea of the importance of this prison will be obtained by mentioning a few of the more celebrated persons who have been confined in it.

The first whom we find mentioned by Livy^h is Manlius (A.U.C. 370, B.C. 382), who had defended the Capitol against the Gauls, but had afterwards been accused of sedition, and was then confined in this prison until he was ultimately condemned, and cast from the Tarpeian rock, then the usual place of public execution. This place was probably near the western corner of the rock, so that the bodies might be thrown out of the city into the great foss, and near to the Tiber. The foss being 20 ft. deep in addition to the height of the rock itself, made the fall more certain to produce instant death. This ancient foss surrounded the Capitoline Hill on all sides, when it was a separate fortress called the Hill of Saturn.

In the year of Rome 558, or B.C. 194, Quintus Pleminius, who had been committed to prison for many offences against the laws, endeavoured to set the city on fire in several places, in order that in the confusion he might escape. He was detected and convicted, and ordered to be confined in the lowest prison, or Robur Tullianum, and executed.

Appian relates that the Conspirators, with Gracchus and Fulvius, were confined in this prison by order of the Consul Opimius. Sallust also states that several of the Conspirators, with Catiline (B.C. 55), were imprisoned by order of Cicero, and were strangled "in Carcere Tulliano."

"When the senate, as I have stated, had gone over to the opinion of Cato, the consul, thinking it best not to wait till night, which was coming on, lest any new attempts should be made during the interval, ordered the triumvirs to make such preparations as the execution of the conspirators required. He himself, having posted the necessary guards, conducted Lentulus to the prison; and the same office was performed for the rest by the prætors.

"There is a place in the prison, which is called the Tullian dungeon, and which, after a slight ascent to the left, is sunk about twelve feet under ground. Walls secure it on every side, and over it is a vaulted roof connected with stone arches; but its appearance is disgusting and horrible, by reason of the filth, darkness, and stench. When Lentulus had been let down into this place, certain

^h "On Manlius being thrown into prison, it appears that a great part of the commons put on mourning, and that great numbers of the people, neglecting their hair and beard, dejectedly flocked about its gates." (Baker's Livy, bk. vi. c. xvi. p. 223.)

men, to whom orders had been given, strangled him with a cord. Thus this patrician, who was of the illustrious family of the Cornelii, and who had filled the office of consul at Rome, met with an end suited to his character and conduct. On Cethegus, Statilius, Gabinius, and Cæparius, punishment was inflicted in a similar mannerⁱ."

Sifax, king of Numidia, was imprisoned here at the time of the triumph of Scipio Africanus. Perseus, king of Macedonia, by Paulus Æmilius. Jugurtha, king of Numidia, and forty-three Ætolian princes were imprisoned here at the same time, as stated by Livy, after the conquest of their country by Scipio Africanus, about two centuries before the Christian era^k. According to Plutarch, Vercingetorix, chief of the Gauls, was first thrown into a bath of icy coldness, and then starved to death in this prison, in the time of Julius Cæsar; and Simon, a captain of the Jews, was put to death here after having been exhibited in the triumph of Vespasian and Titus, as we are told by Josephus^l. Valerius Maximus^m also relates that the body of Q. Cæpio, torn by the hands of the executioners, was exhibited on the steps, to the horror of the people in the Forum Romanum. Under the tyrant Tiberius, two of the principal officers of the Empire, Sabinus and Sejanus, were confined and executed here under circumstances of atrocity. They were beheaded, and their bodies exposed on the Gemonian steps, or steps of horror, which could only be the steps leading from the

ⁱ "Postquam, ut dixi, senatus in Catonis sententiam discessit, consul, optimum factu ratus noctem quæ instabat antecapere ne quid eo spatio novaretur, tres viros quæ ad subplicium postulabat parare jubet: ipse præsiidiis dispositis Lentulum in carcerem deducit: idem fit ceteris per prætores. Est in carcere locus, quod Tullianum appellatur, ubi paululum ascenderis ad lævam, circiter duodecim pedes humi depressus. Eum muniunt undique parietes atque insuper camera lapideis fornicibus juncta, sed incultu tenebris odore fœda atque terribilis ejus facies est. In eum locum postquam demissus est Lentulus, (vindices rerum capitoliū) quibus præceptum erat laqueo gulam fregere. Ita ille patricius ex gente clarissima Corneliorum, qui consulare imperium Romæ habuerat, dignum moribus factisque suis exitium vitæ invenit. De Cethego Statilio, Gabinio, Cæpario eodem modo subplicium sumpsum est." (Gai Sallustii Crispi, De Catilinæ conjuratione, c. 55.)

^k "The conclusion of the *Jugurthine*

War is quite as abrupt as that of the *Conspiracy of Catiline*. Jugurtha, being conveyed to Rome, was led in triumph, with his two sons, by Marius. But the humiliation which he experienced on that occasion, was more than his haughty spirit could endure, and he lost his senses before the termination of the procession. He was then led to the *Tullian dungeon*, the same into which the accomplices of Catiline were afterwards thrown, and precipitated, with great ignominy and violence, to the bottom of it. In his descent, he is said to have exclaimed, 'Heavens, how cold is this bath of yours!' He survived, according to Plutarch and others, six days. See Plutarch's *Life of Marius*. Eutrop. iv. 11 seq. Eutropius, however, says that he was strangled in prison." Watson's *Sallust*, Lond. 1861, p. 214.

^l Josephus de Bello Judaico, lib. vii. c. 5.

^m Valerius Maximus, Epist., lib. vi. c. 9.

Curia or Senaculum, the highest law-court, to the great public prisonⁿ. We are expressly told that the conspirators were condemned by the Senate assembled *in* the Temple of Concord, which has been shewn to have been the entrance to the Senate-house behind it, the passage leading under the platform on which that temple stood, and the decrees of the Senate were publicly announced from the steps of this temple.

The Emperor Vitellius was confined here by his rebellious soldiers, and beheaded on the Gemonian steps^o. “Dio Cassius^p relates, that Sejanus, after sacrificing in the Capitolium, wished to descend into the Forum; his attendants found that they could not pass by the usual way on account of the crowd, and therefore turned by the way that leads to the prison, and so descended by the Gemonian steps.” That is, instead of passing by the usual way that descends on the western and southern sides of the great public building that contains the Tabularium and other offices, they were obliged to pass on the northern and eastern sides of it, and descend by the steps towards the prison.

These are only a few instances out of many in which this celebrated prison is mentioned. Soon after that period the prison was repeatedly filled with the Christians who refused to obey the laws imposed by the Pagan priesthood; many of them afterwards were martyrs, *including SS. Peter and Paul, according to the legends of the Church, although we have no contemporary evidence of the history of these martyrs*. The latest historical mention of this prison that we have met with is in A.D. 368, when a malefactor called Doriforianus, who had been imprisoned here, was taken out of the prison by order of the emperor, and tormented to death outside of the city. We are expressly told by Juvenal, that this was the *only* prison in Rome. Livy also says that robbers and other malefactors were confined here. It is evident also from the Digest of the Laws of the Empire, that this prison was by no means used for political offenders only. It is obvious therefore that it must have been a large prison, very much larger than the two small chambers exhibited as the prison of S. Peter.

The following Christian martyrs are mentioned *in the legends of the Church* as having been confined in this prison :—SS. Peter and Paul; Processus and Martinianus, keepers of the prison, baptized

ⁿ Dion Cassius, lib. lvii. c. xi. ; called also Gradus Gemonii by Pliny, Nat. Hist., lviii. c. 40 ; Scalæ Gemoniæ by Valerius Maximus, l. vi. 3, 3 ; Gemoniæ

only by Suetonius and Tiberius, 61, and Tacitus, Hist., lib. iii. c. 74.

^o Dion Cassius, lib. lxxv. c. 21.

^p Cassio Dionis Hist., lib. lviii. c. 5.

by S. Peter, with forty-seven prisoners ; Palmatius, the consul, imprisoned by Alexander Severus, because he had become a Christian ; Pope Sixtus II. ; the deacons Felicissimus, Agapitus, Marcellus, Abondantius, and Sisinnius ; Lorenzo, or Laurentius, the acolyte ; the priests Eusebius, and Abondius ; also Maximus, Hippolytus, Geminianus, Hadria, Paulina, Neo, Maria, Ciriacus, Largus, Smaragdus, and Crescentianus, with their wives Daria and Crisanta, the widow Lucia, and many other martyrs^q.

In the Acts of the Martyrs, given by Surius for October 25^r, Daria and Crisanto are said to have been cast into this prison, of which an appalling account is given. They were first thrown into one part of it, and then, by order of the Emperor Numerianus, cast into the still lower and more filthy one called the Tullianum, where the stench was intolerable.

We have ascertained that the lower end of both the passage and the drain under it terminate in a branch of the Cloaca Maxima. The upper end of it was cleared out to the length of a hundred and twenty yards, passing between the two parts of the prison, with openings at intervals both to the right and left, which were in all probability to communicate with different chambers of the prison. The passage from the "Prison of S. Peter" crosses this at right angles, and at rather a lower level, with a step up into the main passage, but also continuing beyond it in the direction of the Forum S. Augustus, but it was too much obstructed in this direction to be explored any further. The main line of the passage or tunnel also continues further than we were able to excavate it, under the Via

^q "Iratus igitur Polemius pater Chrysantum in obscuro fœdoque carcere includendum curavit, et paucissimo cibo vesperi tantum nutriendum Interea (Numerianus imperator) jussit infernali retineri custodia, ut simul cum Daria variis cruciatibus afficeretur. Conjectus est igitur in Carcerem Tullianum profundissimum ac teterrimum atque fœdissimum Erat igitur ima custodia in Carcere Tulliano, unde putor horribilis adscendebat, quia cloacarum cuniculis digesta domorum stercora illic jugiter decurrebant : et in hoc decursorio, ut diximus, erat ima et lutea et ita tenebrosa custodia, ut penitus lucifluus aer nec signum ibi diei nec vestigium aliquod lucis ostenderet."

"Prothasi vade in carcerem Capitolii, et purifica eos . . . et omnia fundamenta carceris commota sunt, et fons aquæ inundavit."

"Traditur Lucia in carcerem detrusa, et ex ejus fundamentis fluvio exundante, mediam Urbem interiisse, domum vero Diocletiani a fundamentis avulsam." (Anastasius.)

^r "At vero bb. apostoli (*Petrus et Paulus*) oraverunt Deum, orationeque expleta, b. Petrus in Monte Tarpeio signum crucis expressit in eadem custodia, atque eadem hora emanarunt aquæ a monte, baptizatique sunt Processus et Martinianus a b. Petro Apostolo. Hoc ut viderunt cuncti qui erant in custodia, prostraverunt se ad pedes b. Petri apostoli, et baptizati sunt promiscui sexus et diversæ ætatis numero quadraginta septem. Obtulit autem pro eis sacrificium laudis." (V. Surius in T. I. Julii Boll., p. 303.) Respecting these Acts of the Martyrs, various observations are made by Papebrochio, Cancellieri, and Tillemont.

di Marforio, in the direction of the tomb of Bibulus, but how far it goes it is impossible to tell without continuing the excavations, which would be difficult and expensive. The municipality of Rome took the matter up to some extent, and went to considerable expense in making a new drain to carry off the water into the Cloaca Maxima in another branch. They may perhaps continue this interesting exploration when their funds permit. Rome is undermined in many parts with subterranean passages and old aqueducts. The construction of this passage is quite Etruscan, and exactly the same as that of the original parts of the Cloaca Maxima, recorded to have been built by the same king. The vault is built of squared stones, it is not semi-circular, but semi-hexagonal, a mark of early construction.

One object of this passage originally was to enable the *aquarii*, or water-men, to keep the drain clear; by lifting up one of the flag-stones which separate the passage from the drain under it, they could remove any obstruction. Another use of this passage probably was to drag along the bodies of persons strangled in the prison, and throw them into the Cloaca Maxima, to which this passage leads; the bodies would then float down into the Tiber without being seen. Strangling in prison privately those condemned to death was the custom of the Romans, instead of hanging them publicly.

The two chambers called the "Prison of S. Peter" are now under the church of S. Joseph, in which is a chapel of the Crucifixion, and that name is sometimes given to the church. They were originally at the north-east corner of the Forum Romanum, and almost touching the eastern side of the Temple of Concord. This part of the great prison seems to have occupied the west side of a quadrangle, of which the south side was open to the Forum, on the north side was the main body of the prison, and on the east side another part of it, on the wall of which stood a statue of Oceanus, called also Marforio, from which the street is named^s. The site on which it stood or reclined is marked by an inscription placed there when it was removed^t. Of the two small chambers called the "Prison of S. Peter," the lower one is circular, and is partly

^s The statue is now in the Capitoline Museum (No. 1668 of our photographs).

^t The block of granite which served for a base to this statue was removed

by the Pontifical authorities, and used for a fountain at the foot of an obelisk on the Quirinal. It was in front of the house, No. 99, Via di Marforio.

cut out of the tufa rock, and lined on one side with slabs of travertine. Another side is built of the large blocks of tufa of the time of the Kings, the vault between the two chambers is of travertine. The upper chamber is oblong, and is built of the stone of the Kings, the vault above it is of travertine, or some say of peperino; it is not easy to get at it to see, but it is evidently not of tufa, and not original, but part of the rebuilding. On the cornice in front of the upper chamber is the inscription, with the names of the consuls of the time of Tiberius^u, when it was rebuilt; but the walls of the underground chambers being considered as foundations only, were not altered. The flight of steps from the upper to the lower chamber is modern or medieval.

We have long known that many of the cellars under the Capitol are made in old stone quarries, and it seems possible that nearly the whole of these were at one period made part of the great prison, and that the crypt under S. Nicolas in Carcere was connected by one of these subterranean passages with the rest of the prison. This is, however, another doubtful question, there is no evidence of a prison there except the name; the church is made out of three ancient temples, and what is now the crypt of the church was originally only the floor of the temples, with the passages between them. There is mention in ancient authors of three temples under one roof in the Capitol, and it is quite possible that these three temples were so close together that they were covered by one roof, as they now are. This site, now the church of S. Nicholas in Carcere, may have been within the wall of the Capitoline fortress on the north-west, as those of Concord and Saturn were on the south. But although the *Acta Martyrum* cannot be traced further back than the ninth century, and the works of Baronius, of Surius, and others grounded upon them cannot therefore be cited as authorities to English readers, they at least shew the belief of their time respecting the great prison, and that belief was probably well founded.

The principal chambers of the prison that now remain are cellars under houses in the Via di Marforio, Nos. 39, 40, 42, and in the Vicolo del Ghetterello, at the back of them. These chambers are each forty feet long, and fourteen wide, they are much divided by modern and medieval walls and stairs, but the original construction of the large blocks of tufa clearly distinguish the original walls from all the additions. Calpurnius Flaccus, writing in the

^u C . VIBIVS . C . F . RVFINVS . M . COCCEIVS . NERVA . COS . EX . S . C .

third century, mentions the large stones in a description of the prison as he saw it^x. These chambers are sixty feet above the level of the sea, but not much above the level of the Tiber at Rome, and they were all full of water at the time of the great flood in 1871. The present vaults are brick, of the time of the Empire, and there is an opening in the vault of each chamber for letting down prisoners and provisions; there is no original staircase. Two of the chambers have a sort of triangular apse at the end, divided by the wall of partition, which runs into the centre of the triangle, this is supposed to have been for some purpose of torture. This floor has been raised about six feet by filling it up with earth, with a bed of plaster on the top, and the upper floors were raised in the same proportion, the put-log holes for the beams remain visible in the walls. This raising of the level was probably done in the time of Tiberius, when the prison was rebuilt, in order to make the floor high enough to be above the ordinary floods of the Tiber, or the land-springs which abound in Rome, and are high in the spring, low in the autumn and early winter. The prison has evidently been more extensive, we have not been able to find any external walls.

Velleius Paterculus mentions a stone bridge at the gate of the prison, against which the son of Falvius Flarius knocked his head and killed himself; this was probably over the steps, and carried a passage from one part of the prison to the other.

The Robur Tullianum seems to have been an addition to this prison^y, and only one wall of it remains visible; this is distinguished

^x Calpurnius Flaccus in Declamat. iv. apud Gori, p. 8.

^y The curiosity of Signor Gori and his friend Signor Ernest de Mauro was further excited by the popular story that there is an underground passage from this prison to the catacomb of S. Sebastian, about five miles distant. This made them explore all the passages as far as possible, but they could trace them only to the Cloaca Maxima, as might have been expected. The legend probably originated from the custom of bringing the relics found in the catacombs into the city in the eighth and ninth centuries, and building crypts under the churches to receive them, which were called by the old name of Catacombs. They did, however, trace the subterranean passage so far as to hear over their heads the rolling of the carriages in the Via della Consolazione before they reached the Cloaca

Maxima, near the Basilica Julia. In the direction towards the Vicolo del Ghettarello, the passage was much choked up. The excavations made in the spring of 1873 in the Via di Marforio, towards the northern end of it, on the ridge that crosses the street there, shewed that the passage did not extend to that point, as we arrived at the tufa rock. We found the junction with the Capitoline rock of a wall of the early Kings, going across the valley or great foss in the direction of the small street at the south end of the Forum of Trajan, and to the great Wall of the Kings, which formed the west side of the Forum of Augustus. There would naturally have been an inner foss within the *agger* that forms the ridge, and it is probable that the passage terminates there. The great prison was between the Capitolium and the Forum of Julius Cæsar, but on the

by the holes left by the iron clamps, as usual in the walls of that king (the third period of the Walls of the Kings); it is separated from the other wall by a straight vertical joint, and the arches above in the Vicolo del Ghetterello were evidently rebuilt of stones taken from other portions of that prison.

low level; it may, however, very well have been a lofty building and massive, such as Vitruvius mentions as an ornament to the north end of the Forum. It would also naturally be isolated, and would have a street or passage all round it, probably at the low level of the foss. The very early drain and passage over it probably followed the line of the foss under the eastern side of the Capitoline Hill, and would turn directly east when it arrived at the inner foss of the great *agger*. The Via di Marforio is considered by the local antiquaries as very ancient, but

this can hardly have been the case along its whole course, as it crosses over the *agger* and over the foss, on each side of it. At its north side the Forum of Trajan extended to that point, as is shewn by the existing remains in the cellars under the houses on the eastern side of the street. The tomb of Bibulus had also originally stood alone in an open space, as is shewn by the inscription, being repeated on two sides, and probably on all sides; it is now built into a house, and the lower part of it forms a cellar.

THIRD APPENDIX TO PRIMITIVE FORTIFICATIONS.

ROMULUS. BOYS NURTURED BY WOLVES.

IN Major-General Sir W. H. Sleeman's "Journey through the Kingdom of Oude in 1849-50^a," there are several well-authenticated instances of boys having been carried off by wolves and nurtured by them, but in all these cases the boys seem to have become quite wild beasts, with the same habits as the cubs of the wolves with whom they had been brought up. They always preferred raw meat, and could not be taught to speak or to understand anything as human beings. These cases, therefore, only so far bear out the legend of Romulus and Remus as to shew, that it is possible for infants to be carried off and nurtured by wolves. The same legend of the wild man of the woods occurs in many other countries and at various periods. The story of Valentine and Orson is a nursery tale, and there must be some foundation for the story. But we have no authenticated instance of a child so nurtured having afterwards become a great man, and shaken off entirely the wild-beast character. This cannot be considered to go farther than to shew that the Roman legend might *possibly* be true. It is quite evident that Livy did not believe it, and the rejection of this legend does not in the slightest degree affect the history of Roma Quadrata or of the Kings of Rome. The first book of Livy is as good a history of the period as could be obtained at the time he wrote it. The recent vindication of it by Mr. Dyer^b against Professor Seeley is very satisfactory. No one has more carefully studied the subject than Mr. Dyer.

The following extracts from Sir W. H. Sleeman's Journey will be interesting to those who are anxious for information on the subject:—

"Wolves are numerous in the neighbourhood of Sultanpoor, and, indeed, all along the banks of the Goomtee river, among the ravines that intersect them ;

^a "A Journey through the Kingdom of Oude, in 1849—1850, by direction of the Right Hon. the Earl of Dalhousie, Governor-General. With Private Correspondence relative to the Annexation of Oude to British India, &c. By Major-General Sir W. H. Sleeman,

K.C.B., resident at the Court of Lucknow." In two volumes, Crown 8vo. (London : Richard Bentley. 1858.)

^b A Plea for Livy, with Critical Notes on his first book, by T. H. Dyer. London, 1873.

and a great many children are carried off by them from towns, villages, and camps. It is exceedingly difficult to catch them, and hardly any of the Hindoo population, save those of the very lowest class who live a vagrant life, and bivouac in the jungles, or in the suburbs of towns and villages, will attempt to catch or kill them. All other Hindoos have a superstitious dread of destroying or even injuring them; and a village community within the boundary of whose lands a drop of wolf's blood has fallen believes itself doomed to destruction."— (pp. 206-7.)

"There is now at Sultanpoor a boy who was found alive in a wolf's den, near Chandour, about ten miles from Sultanpoor, about two years and a-half ago. A trooper, sent by the native governor of the district to Chandour, to demand payment of some revenue, was passing along the bank of the river near Chandour about noon, when he saw a large female wolf leave her den, followed by three whelps and a little boy. The boy went on all fours, and seemed to be on the best possible terms with the old dam and the three whelps, and the mother seemed to guard all four with equal care. They all went down to the river and drank without perceiving the trooper, who sat upon his horse watching them. As soon as they were about to turn back, the trooper pushed on to cut off and secure the boy; but he ran as fast as the whelps could, and kept up with the old one. The ground was uneven, and the trooper's horse could not overtake them. They all entered the den, and the trooper assembled some people from Chandour with pickaxes, and dug into the den. When they had dug in about six or eight feet, the old wolf bolted with her three whelps and the boy. The trooper mounted and pursued, followed by the fleetest young men of the party; and as the ground over which they had to fly was more even, he headed them, and turned the whelps and boy back upon the men on foot, who secured the boy, and let the old dam and her three cubs go on their way.

"They took the boy to the village, but had to tie him, for he was very restive, and struggled hard to rush into every hole or den they came near. They tried to make him speak, but could get nothing from him but an angry growl or snarl. He was kept for several days at the village, and a large crowd assembled every day to see him. When a grown-up person came near him, he became alarmed, and tried to steal away; but when a child came near him, he rushed at it, with a fierce snarl like that of a dog, and tried to bite it. When any cooked meat was put before him, he rejected it in disgust; but when any raw meat was offered, he seized it with avidity, put it on the ground under his paws, like a dog, and ate it with evident pleasure. He would not let any one come near him while he was eating, but he made no objection to a dog coming and sharing his food with him. The trooper remained with him four or five days, and then returned to the governor, leaving the boy in charge of the Rajah of Hasunpoor. He related all that he had seen, and the boy was soon after sent to the European officer commanding the First Regiment of Oude Local Infantry at Sultanpoor, Captain Nicholetts, by order of the Rajah of Hasunpoor, who was at Chandour, and saw the boy when the trooper first brought him to that village. This account is taken from the Rajah's own report of what had taken place.

"Captain Nicholetts made him over to the charge of his servants, who take great care of him, but can never get him to speak a word. He is very inoffensive, except when teased, Captain Nicholetts says, and will then growl surlily at the person who teases him. He had come to eat anything that is thrown to him, but always prefers raw flesh, which he devours most greedily. He will drink a whole

pitcher of butter-milk when put before him, without seeming to draw breath. He can never be induced to keep on any kind of clothing, even in the coldest weather. A quilt stuffed with cotton was given to him when it became very cold this season, but he tore it to pieces, and ate a portion of it, cotton and all, with his bread every day. He is very fond of bones, particularly uncooked ones, which he masticates apparently with as much ease as meat. He has eaten half a lamb at a time without any apparent effort, and is very fond of taking up earth and small stones and eating them. His features are coarse, and his countenance repulsive ; and he is very filthy in his habits. He continues to be fond of dogs and jackals, and all other small four-footed animals that come near him ; and always allows them to feed with him if he happens to be eating when they approach.

“Captain Nicholetts, in letters dated the 14th and 19th of September, 1850, told me that the boy died in the latter end of August, and that he was never known to laugh or smile. He understood little of what was said to him, and seemed to take no notice of what was going on around him. He formed no attachment for any one, nor did he seem to care for any one. He never played with any of the children around him, or seemed anxious to do so. When not hungry he used to sit petting and stroking a parrear or vagrant dog, which he used to permit to feed out of the same dish with him. A short time before his death Captain Nicholetts shot this dog, as he used to eat the greater part of the food given to the boy, who seemed in consequence to be getting thin. The boy did not seem to care in the least for the death of the dog. The parents recognised the boy when he was first found, Captain Nicholetts believes ; but when they found him to be so stupid and insensible, they left him to subsist upon charity. They have now left Hasunpoor ; and the age of the boy when carried off cannot be ascertained ; but he was to all appearance about nine or ten years of age when found, and he lived about three years afterwards. He used signs when he wanted anything, and very few of them except when hungry, and he then pointed to his mouth. When his food was placed at some distance from him, he would run to it on all fours like any four-footed animal ; but at other times he would walk upright occasionally. He shunned human beings of all kinds, and would never willingly remain near one. To cold, heat, and rain he appeared to be indifferent ; and he seemed to care for nothing but eating. He was very quiet, and required no kind of restraint after being brought to Captain Nicholetts. He had lived with Captain Nicholetts’ servants about two years, and was never heard to speak till within a few minutes of his death, when he put his hands to his head, and said, ‘it ached,’ and asked for water : he drank it, and died.”—(pp. 208-11.)

Another instance is that of a boy three years of age, who was carried off by a wolf in the presence of his mother, who could not save him. She heard no more of him for six years, he was then found in the jungle with wolves, was caught and brought back, and the mother recognised him by marks on the body of a scald he had received before he was carried off, and other marks well known to her.

“At Chupra, twenty miles east from Sultanpoor, lived a cultivator with his wife and son, who was then three years of age. In March, 1843, the man went

to cut his crop of wheat and pulse, and the woman took her basket and went with him to glean, leading her son by the arm. The boy had lately recovered from a severe scald on the left knee, which he got in the cold weather, from tumbling into the fire, at which he had been warming himself while his parents were at work. As the father was reaping and the mother gleaning, the boy sat upon the grass. A wolf rushed upon him suddenly from behind a bush, caught him up by the loins, and made off with him towards the ravines. The father was at a distance at the time, but the mother followed, screaming as loud as she could for assistance. The people of the village ran to her aid, but they soon lost sight of the wolf and his prey.

“She heard nothing more of her boy for six years, and had in that interval lost her husband. At the end of that time, two sipahees came, in the month of February, 1849, from the town of Singramow, which is ten miles from Chupra, on the bank of the Khobae rivulet. While they sat on the border of the jungle, which extended down to the stream, watching for hogs, which commonly come down to drink at that time in the morning, they saw there three wolf-cubs and a boy come out from the jungle, and go down together to the stream to drink. The sipahees watched them till they had drank, and were about to return, when they rushed towards them. All four ran towards a den in the ravines. The sipahees followed as fast as they could ; but the three cubs had got in before the sipahees could come up with them, and the boy was half way in when one of the sipahees caught him by the hind leg, and drew him back. He seemed very angry and ferocious, bit at them, and seized in his teeth the barrel of one of their guns, which they put forward to keep him off, and shook it. They however secured him, brought him home, and kept him for twenty days. They could for that time make him eat nothing but raw flesh, and they fed him upon hares and birds. They found it difficult to provide him with sufficient food, and took him to the bazaar in the village of Koeleepoor ; and there let him go to be fed by the charitable people of the place till he might be recognised and claimed by his parents. One market-day a man from the village of Chupra happened to see him in the bazaar, and on his return mentioned the circumstance to his neighbours. The poor cultivator’s widow, on hearing this, asked him to describe the boy more minutely, when she found that the boy had the mark of a scald on the left knee, and three marks of the teeth of an animal on each side of his loins. The widow told him that her boy when taken off had lately recovered from a scald on the left knee, and was seized by the loins when the wolf took him off, and that the boy he had seen must be her lost child.

“She went off forthwith to the Koelee bazaar, and, in addition to the two marks above described, discovered a third mark on his thigh, with which her child was born. She took him home to her village, where he was recognised by all her neighbours. She kept him for two months, and all the sporting landholders in the neighbourhood sent her game for him to feed upon. He continued to dip his face in the water to drink, but he sucked in the water, and did not lap it up like a dog or wolf. His body continued to smell offensively. When the mother went to her work, the boy always ran into the jungle, and she could never get him to speak. He followed his mother for what he could get to eat, but shewed no particular affection for her ; and she could never bring herself to feel much for him ; and after two months, finding him of no use to her, and despairing of even making anything of him, she left him to the common charity of the village. He soon after learnt to eat bread when it was given him, and ate whatever else he

could get during the day, but always went off to the jungle at night. He used to mutter something, but could never be got to articulate any word distinctly. The front of his knees and elbows had become hardened from going on all fours with the wolves. If any clothes are put on him, he takes them off, and commonly tears them to pieces in doing so. He still prefers raw flesh to cooked, and feeds on carrion whenever he can get it. The boys of the village are in the habit of amusing themselves by catching frogs and throwing them to him ; and he catches and eats them. When a bullock dies, and the skin is removed, he goes and eats it like a village dog. The boy is still in the village, and this is the description given of him by the mother herself, who still lives at Chupra. She has never experienced any return of affection for him, nor has he shewn any such feeling for her. Her story is confirmed by all her neighbours, and by the head landholders, cultivators, and shopkeepers of the village^c.”—(pp. 211—214.)

Several other similar instances are related on pages 214 to 222, which are entertaining, and seem well-authenticated, but these are not much to the purpose, as they do not relate any case of infants carried off and suckled by wolves.

^c “In November, 1850, Captain Nicholetts, on leaving the cantonments of Sultanpoor, where he commanded, ordered this boy to be sent in to me

with his mother, but he got alarmed on the way and ran to a jungle. He will no doubt find his way back soon if he lives.”

FOURTH APPENDIX TO PRIMITIVE FORTIFICATIONS.

STREETS OF ROME.

THE following extract from the *Annals* of Tacitus on the subject of new streets after the great fire of Nero, is so much to the purpose that it ought not to be omitted here :—

“The ground which, after marking out his own domain, Nero left to the public, was not laid out for the new city in a hurry, and without judgment, as was the case after the irruption of the Gauls. A regular plan was formed ; the streets were made wide and long ; the elevation of the houses was defined, with an open area before the doors, and porticoes to secure and adorn the front. The expense of the porticoes Nero undertook to defray out of his own revenue. He promised besides, as soon as the work was finished, to clear the ground, and leave a clear space to every house, without any charge to the occupier. In order to excite a spirit of industry and emulation, he held forth rewards proportioned to the rank of each individual, provided the buildings were finished in a limited time. The rubbish, by his order, was removed to the marshes of Ostia, and the ships that brought corn up the river were to return loaded with the refuse of the workmen. Add to all this, the several houses built on a new principle were to be raised to a certain elevation, without beams or wood-work, on arches of stone from the quarries of Alba or Gabii ; those materials being impervious, and of a nature to resist the force of fire. The springs of water which had been before that time intercepted by individuals for their separate use, were no longer suffered to be diverted from their channel, but left to the care of commissioners, that the public might be properly supplied, and, in case of fire, to have a reservoir at hand to stop the progress of the mischief.

“It was also settled that the houses should no longer be contiguous, with slight party walls to divide them ; but every house was to stand detached, surrounded and insulated by its own inclosure. These regulations, it must be admitted, were of public utility, and added much to the embellishment of the new city. But still the old plan of Rome was not without its advocates. It was thought more conducive to the health of the inhabitants. The narrowness of the streets, and the elevation of the buildings, served to exclude the rays of the sun ; whereas the more open space, having neither shade nor shelter, left men exposed to the intense heat of the day ^a.”

JERUSALEM (FOR COMPARISON).

“Tacitus has described the city of Jerusalem and the Temple ; but perhaps, with the advantage of D’Anville’s plan, a more distinct idea of the place may now be given. The city stood upon two hills, namely, Mount Sion to the south, and Acra to the north. The former, being the loftiest, was called the upper, and Acra the lower city. The walls of each were washed on the outside by a broad

^a *Annals* of Tacitus, xv. 43.

and rapid stream, that rushed like a torrent from west to east, through the valleys of Hinnon and Cedron, to the foot of the Mount of Olives. The famous Temple stood on a third hill called Mount Moriah, which on the eastern side was bounded by the valley of Cedron. A fourth hill, to the north of the Temple, was in process of time enclosed within the fortifications ; and there the Jews, abounding in numbers, built another city. The new quarter was called Beretha. Josephus says the circumference of the whole city was three-and-thirty stadia, computed by D'Anville at about three thousand three hundred paces. Art conspired with the natural situation to make the works almost inaccessible. A wall of great strength and prodigious elevation surrounded Sion, extending along the north and west sides of the hill, and, being carried eastward, separated it from Mount Acra. Mount Acra was enclosed by another wall which stretched to the north, and then diverging towards the east, ended at Fort Antonia. The third wall defended the Temple to the east. These fortifications were further strengthened by towers built with consummate skill, as may be seen in the description given by Tacitus. Five of the towers were distinguished by their strength and magnificence. The first was the tower Psephina, an octagon building seventy cubits high, commanding a prospect of Arabia towards the east, and on the western side a view of Palestine and Phœnicia to the margin of the sea ; the other four were built by Herod, who was placed on the throne by Marc Antony. From motives of gratitude to his patron, Herod called one of his new structures the Tower Antonia. The other three he dedicated to the persons whom he most esteemed, and, to do them honour, made use of their names : Hippichos was his dearest friend ; Phasæl was his brother ; and Mariamne, it is unnecessary to say, was the wife whom he loved to distraction, and in his fury murdered, while he adored her.

“The Temple of Jerusalem was an immense fabric, divided by a number of courts, and surrounded with porticoes and magnificent galleries, which were, in fact, so many fortifications, that made it look, as Tacitus observes, more like a citadel than a religious sanctuary. The place of worship, or the Temple properly so called, stood in the centre, detached from all other buildings ; the inside was divided by a veil or curtain into two parts, one of which was the Holy of Holies. The outward space was filled with buildings appropriated to religious ceremonies, and the dwelling of the priests and others, who officiated at the altar. A large court, encompassing those several buildings, was called the Court of the Gentiles, who were allowed to enter that part, but strictly excluded from the sanctuary. The whole of this vast quadrangle, according to Josephus, was six stadia, or three-quarters of a mile round ; as D'Anville computes it, the circumference was still greater ^b.”

THE SIEGE OF JERUSALEM.

“The Jews appeared in force on the plain under the ramparts, determined, if successful, to push their advantage, and, if obliged to give ground, sure of a retreat within their fortifications. . . . But Jerusalem stood upon an eminence, difficult of approach. The natural strength of the place was increased by redoubts and bulwarks, which, even on the level plain, would have made it secure from insult. Two hills, that rose to a prodigious height, were enclosed by walls constructed with skill, in some places projecting forward, in others retiring inwardly, with the angles so formed that the besiegers were always liable to be annoyed

^b Murphy's Tacitus, Hist., Appendix to book v. sect. 5.

in flank. The extremities of the rock were sharp, abrupt, and craggy. In convenient places near the summit towers were raised 60 ft. high, and others on the declivity of the sides rose no less than 120 ft. These works presented a spectacle altogether astonishing. To the distant eye they seemed to be of equal elevation. Within the city there were other fortifications, inclosing the palace of the kings. Above all was seen, conspicuous to view, the tower Antonia, so called by Herod in honour of the triumvir, who had been his friend and benefactor.

“The Temple itself was a strong fortress, in the nature of a citadel. The fortifications were built with consummate skill, surpassing in art as well as labour all the rest of the works. The very porticoes that surrounded it were a strong defence. . . . Since the reduction of the place by Pompey, experience taught the Jews new modes of fortification, and the corruption and venality that pervaded the whole reign of Claudius favoured all their projects. By bribery they obtained permission to rebuild their walls. The strength of the works plainly shewed that in profound peace they meditated future resistance. . . . They had three armies, and as many generals. The outward walls, forming the widest extent, were defended by Simon; John, otherwise called Bargioras, commanded in the middle precinct; Eleazar kept possession of the Temple^c.”

“Simon the high priest, the son of Onias, who in his life repaired the house again, and in his days fortified the Temple.

“And by him was built from the foundation the double height, the high fortress of the wall about the Temple.

“In his days the cistern to receive water, being in compass as the sea, was covered with plates of brass, (bronze):

“He took care of the Temple that it should not fall, and fortified the city against besieging:

“How was he honoured in the midst of the people in his coming out of the sanctuary^d.”

^c History of Tacitus, bk. v., c. 11 and 12.

^d Ecclesiasticus l. 1—5.

ERRATA ET CORRIGENDA.

PRIMITIVE FORTIFICATIONS.

Errata.

Corrigenda.

<i>p.</i> iii. <i>line</i> 35. Monumentum Ancy- rinum.	Monumentum Ancyranum.
<i>p.</i> x. <i>line</i> 37. Cohors Vigilum.	Cohors Vigilum.
<i>p.</i> 5, <i>note</i> l. sordido.	sordide.
<i>Ibid.</i> Sapientes.	Sapientis.
<i>p.</i> 7, <i>note</i> p. Signi.	Segni.
<i>p.</i> 11, <i>line</i> 33. Capital.	Capitol.
<i>p.</i> 12, <i>note</i> z. Carinarium.	Carinarum.
<i>p.</i> 13, <i>note</i> a. Muncipium.	Municipium.
<i>p.</i> 14, <i>line</i> 20. Arricia.	Aricia.
<i>p.</i> 19, <i>note</i> l. <i>pomerium</i> , or <i>pomerio</i> .	<i>pomario</i> , or <i>pometo</i> .
<i>p.</i> 22, <i>note</i> s. "Hujusce inquam pomœ- ria summa sacra via ubi pomi ve- neunt contra aurea imaginem."	"Huiusce inquam pomaria summa sacra via ubi poma veneunt contra auream imaginem."
<i>p.</i> 25, <i>line</i> 3. S. Georgio.	S. Giorgio.
<i>p.</i> 27, <i>line</i> 16. <i>infama</i> .	<i>infima</i> .
<i>p.</i> 27, <i>note</i> e. Fiesoli.	Fiesole.
<i>p.</i> 29, <i>line</i> 20. Verita.	Verità.
<i>p.</i> 29, <i>line</i> 22. The great altar of Her- cules . . . near the <i>Ara Maxima</i> .	These were probably the same ; two names for one altar.
<i>p.</i> 31, <i>line</i> 22. Fons Juturni.	Fons Juturnæ.
<i>p.</i> 32, <i>note</i> t. Forum Cupedinis Cupi- ditate.	Forum Cupidinis a cupiditate.
<i>p.</i> 33, <i>note</i> v. Remurra.	Remuria.
<i>Ibid.</i> vocabitur.	vocabatur.
<i>p.</i> 33, <i>note</i> x. "Nam olim paludibus mons erat ab reliquis disclusus itaque eo ex urbe advehentur ratibus, cujus vestigia, quod que cum aqua dicitur Velabrum, id inde ascendebat ad infimum novam viam." (Varro, de Ling. Lat., v. 7, p. 49, ed. Spengel, 1826.)	"Nam olim paludibus mons erat ab reliquis disclusus, itaque eo ex urbe advehebantur ratibus : quous ves- tigia, quod ea, qua tum vehebatur, etiam nunc dicitur Velabrum, et, unde escendebant. ad infumam no- vam viam locus sacellum Velabrum." (Varro, de Ling. Lat., v. § 43, ed. Mueller, 1833.)

<i>Errata.</i>	<i>Corrigenda.</i>
<i>p.</i> 34, <i>line</i> 14. Fiesoli.	Fiesole.
<i>p.</i> 42, <i>note</i> n. Cuum.	Cum.
<i>p.</i> 43, <i>note</i> t. sub Publicii clivos.	sub Publicii clivo.
<i>p.</i> 45, <i>line</i> 11. Torre dei Milizie.	Torre delle Milizie.
<i>p.</i> 48, <i>line</i> 7. Forum Montinarium . . . Piazza del Campidoglio.	The Piazza del Campidoglio was the Area Capitolina of Aulus Gellius; the Forum Montinarium was at the foot of the hill, on the northern side.
<i>p.</i> 52, <i>note</i> r. Querqual.	Querquetulanus.
<i>p.</i> 55, <i>line</i> 13. Sante Croce.	Santa Croce.
<i>p.</i> 57, <i>line</i> 17. Mons Saturnia.	Mons Saturni.
<i>p.</i> 57, <i>line</i> 28. There are six rather pro- minent mounds upon it which were called Quirinales, on three of which the temples Salutaris, Mucialis, and Quitiaris were situated, &c.	Terentius Varro, in the paragraph here referred to (<i>De Ling. Lat.</i> , c. 5. s. 51, edit. Mueller, 1833), probably intended to include the other two <i>colles</i> , the Viminal and Esquiline; if so, the Quirinal Palace, the Barberini Palace, and the great church of S. Maria Maggiore now occupy three of these summits.
<i>p.</i> 58, <i>note</i> 1. The Torre dei Conti (or more correctly, the Tor dei Conti), &c. Can this have been the <i>Capitolium</i> <i>Vetus</i> , and the residence of Numa?	The old tufa wall of the time of the Kings, on which the modern tower stands, was part of the second wall of Rome, that enclosed the two hills in one city; but could not be the Capitolium Vetus, because that was in Regio VI., whereas this tower is in Regio IV.
<i>Ibid.</i> Capitolum Vetus.	Capitolium Vetus.
<i>p.</i> 63, <i>line</i> 5. Piazza de Monte Cavallo.	Piazza di Monte Cavallo.
<i>p.</i> 63, <i>line</i> 15. Piazza dei Apostoli.	Piazza de' SS. Apostoli.
<i>p.</i> 69, <i>line</i> 2. Verita.	Verità.
<i>p.</i> 69, <i>note</i> y. Favi.	Fabii.
<i>p.</i> 72, <i>note</i> p. inter Esquilinum Colli- num que portam.	inter Esquilinam Collinamque portam.
<i>p.</i> 73, <i>note</i> u. egredissimi.	egredimini.
<i>Ibid.</i> Esquilinæ porta.	Esquilina porta.
<i>p.</i> 74, <i>note</i> x. in eminentiora.	in eminentiora.
<i>p.</i> 75, <i>line</i> 27. Quatro Santi.	Quattro Santi.
<i>p.</i> 80, <i>note</i> t. Catularium.	Catulariam.

WALLS AND GATES OF ROME.

P R E F A C E.

THE Walls and Gates of Rome are always considered as among the most interesting remains of antiquity that have been preserved to our time. Notwithstanding the numerous vicissitudes through which they have passed during so many centuries,—the sieges they have sustained,—the demolition ordered by the Goths in the fifth century, and begun, but only very partially carried out,—and the numerous repairs by successive Popes, each in the bad style of his period, together with the recent so-called *restorations*,—we still have many parts remaining of the time of the early Empire, including several miles of the great wall of Aurelian, of the third century, and the gateway fortresses added by Stilicho, under Honorius, and repaired by Theodoric after the lapse of another century and the damages done by the Goths.

We have also some of the gateways of an earlier period (built upon the old earthworks), from the first century downwards, and other buildings which, standing on that outer bank, were incorporated in the great wall of Aurelian, on the extension of the boundary of the City beyond the inner works of Servius Tullius, to which it had been limited for several centuries. The Prætorian Camp and the Sessorium are the two most important ancient works included in this wall; but there are others also :—the Lateran Palace, with its gate; the Aqueducts for the space of a mile, from the Palace gardens of the Sessorium, where the water entered Rome, to the Prætorian Camp, passing over the two great eastern gates,—first, the Porta Maggiore, sometimes called the Porta Sessoriana, as well as Prænestina by those going to Præneste, Labicana by those going to Labicum, and Esquilina by those entering Rome through this gate into the Exquilæ, long the public burial ground, and thence onwards to the Esquiline Hill. Near the Porta di S. Lorenzo is the outer

wall of a fine reservoir of the second century, made for the Aqua Tepula, as rebuilt by Trajan : the remarkable feature in this wall is the series of marble corbels still remaining intact, which have carried a *hourd* (or wooden balcony). The *specus* or conduit of the Tepula, with its triangular head, is visible at an angle in the wall, where it entered into this great reservoir.

The Porta di S. Lorenzo was one of the gates leading to Tibur, or Tivoli, and was called the Porta Tiburtina by persons going there ; but it was also called Porta Viminalis by persons entering Rome, and going through this gate to the Viminal Hill, as we are told by Frontinus, writing in the first century. The inscription of the time of Augustus, remaining on the face of the conduit over that gate, identifies it as the gate intended by him. That now called the Porta Chiusa, or the closed gate, at the south-western corner of the Prætorian Camp, was so called because people could not agree in the name of it when the gates were named in modern times. The exterior of this gateway is of the time of Honorius, but the interior is much earlier. There is no doubt that one of the roads to Tivoli went through this gate, and it was the most direct line ; the old road, called Via Cupa, is very near to this at the further corner of the Prætorian Camp ; it is a very ancient way, cut out of the solid rock of tufa for about half-a-mile ; but from its depth and narrowness it was not convenient for carriages, and a new one was made from the Porta di S. Lorenzo to the church of the same name, upon a bank made across the great ancient foss of the City. This can still be seen to be the case from the vineyards, but the walls on each side conceal the fact from persons going along it ; the old and the new roads met at the church. The proper name for the Porta Chiusa must be Porta Tiburtina, and the other gate is properly called after S. Lorenzo, as leading direct to that great church and burial-ground.

Near the Porta di S. Lorenzo, and close to the great reservoir of the Tepula before mentioned, is a square gate in the wall long closed ; it was probably there before the time of Aurelian, and was closed at the time that wall was built. The old road from Præneste is believed to have passed through that gate, as it runs in a straight line

towards it as far as the edge of the great external foss ; but the part nearest Rome is closed for about two miles, and is accessible on foot or on horseback only. Another ancient gate, the Porta Ardeatina, leading to Ardea, was probably closed at the same time ; the construction of its arch and piers is clearly of the time of Nero, the best period of brickwork ; and the old way from that gate for half-a-mile out of Rome can be traced in the vineyards as far as the chapel called “ Domine quo vadis,” and the tomb of Priscilla opposite to it, with a round tower of the Medieval period built upon it. This is just the corner of the Via Ardeatina, at its junction with the Via Appia, and it is evident that the Via Ardeatina is older than the Via Appia, as the latter is made to deviate to the east, to allow space for the tombs on each side.

The usual manner of seeing the walls and gates is to take a drive along the outside of the walls on the eastern side of Rome, from the Porta del Popolo near the Tiber on the north, to the Porta di S. Paolo and Monte Testaccio near the Tiber again on the south, and this is a most interesting drive (or walk, for good walkers). This is the line described in the fourth section of this chapter, the description of the circuit of the walls, in which we have followed the Itinerary of Einsiedlen^a. We have endeavoured to shew what still remains of the objects described in that minute account of the ninth century. The writer begins with a part of the wall along the bank of the Tiber on the west side of Rome, which is now either entirely destroyed, or what does remain is no longer visible, owing to the space being occupied by modern Rome, but when the water is low in the river the lower part of several towers can be seen. He also crosses the Tiber and gives an account of the wall in the Trastevere on the Janiculum, but not of the Leonine City, as he wrote before the time of Pope Leo, who founded it. He does, however, include the Hadrianum, the fortress to defend the gate of S. Peter, now the castle of S. Angelo. It is probable that the Mausoleum of Hadrian was always intended to be the centre of a great fortress, to defend a weak side of Rome, as, near this bend of the

^a So called, because the manuscript of the ancient Itinerary, of the beginning of the ninth century, was found in the convent library there.

river there is a ford when the water is low ; there appears, indeed, to be no other motive for making a road for animals to the top of the Mausoleum within the original outer wall of this tomb.

Our description begins, therefore, at the Porta del Popolo, near the Tiber on the north, and is continued to the Porta di S. Paolo, near the Tiber again on the south. There is reason to believe that the celebrated Muro Torto was part of the foundations of the palace of Sylla the dictator, which occupied all that portion of the Pincian Hill, as far as the Villa Medici, now the French Academy, and the angle of the wall beyond it. Some think this was the Villa of the Domitii. The Porta Pinciana is one of the old gateway fortresses little altered, having long been closed. The Porta Salaria has been entirely destroyed in 1871 ; the remains of it were, however, in a bad state, and it did not differ from the other gateways of the same period, of which several remain. These were built by Stilicho, under the Emperor Honorius, A.D. 403, and several of them were repaired and restored by King Theodoric about the year 500, as appears from his letters preserved by Cassiodorus. The most perfect of these gateway fortresses is the Porta Ostiensis, or di S. Paolo, where we have the two inner gates of the time of Claudius, the outer gateway with its towers, and the barbican of the time of Theodoric. The modern Porta Pia takes the place of the old Porta Nomentana, which is almost destroyed. This is near the Prætorian Camp, the northern wall of which is original, of the time of Tiberius, and very interesting. At the foot of the wall is an aqueduct, a branch of the Anio Vetus, faced with *opus reticulatum* of an early character ; it was evidently made upon the old earthwork before the fine brick wall of Tiberius was built upon it. In the upper part of the same wall are remains of a *hourd*, but the marble corbels to carry this wooden balcony have been chopped off to obtain the marble, probably to burn it into lime. The east and south walls of the Prætorian Camp were rebuilt after it had been demolished by Constantine, and part of it after it had again been destroyed by the Goths. The interior of the ancient wall, with the sleeping-places for the guards in it, and other portions of this inner side, are more interesting than the outer facing.

The great corridor of Aurelian for the sentinel's path from one tower to another often remains, even where the exterior facing has been rebuilt. There are several miles of this corridor, sometimes mistaken by strangers for an aqueduct, as the conduits of the aqueducts are not unfrequently carried on arcades of similar appearance at first sight: this is especially the case between the Amphitheatrum Castrense and the Porta di S. Giovanni, where the outer wall has been destroyed, and the arcade of the corridor stands clear against the sky, so that it looks very much like an aqueduct. The finest part of the corridor is near the Porta di S. Sebastiano, the ancient Porta Appia, on both sides of which the corridor is for about half-a-mile quite perfect. On the western side of the gate, is the remarkable fresco painting of the Madonna of the sixth century, which has been preserved by the happy accident that it was over the head of the soldiers in the lofty corridor: hence it was not noticed, and has hitherto escaped observation. It may have been made by the Greek soldiers of Belisarius, or in the repairs of Theodoric.

Of the Leonine City some of the towers remain nearly perfect on the Vatican Hill above S. Peter's, now in the Pope's garden; they are very distinctly visible from the opposite hill, in ascending outside of the wall of San-Gallo, by which the Vatican fortress was connected with that on the Janiculum in the seventeenth century. The wall connecting the Vatican Palace with the castle of S. Angelo with a way on the top of it, is also perfect and extremely picturesque where it can be seen; it is, however, much concealed by modern houses and garden walls.

CONTENTS OF BOOK I. THE PRIMITIVE FORTIFICATIONS.

CHAPTER II. SECTION I. WALLS AND GATES OF ROME.

	PAGE		PAGE
Extension of the Fortifications made by Sylla and the Early Emperors	87	The Prætorian Camp, built in the time of Tiberius upon an old Earthwork	89
No additions to the City until the time of Sylla, B.C. 80	ib.	Aqueduct of Claudius at the Sessorium	ib.
His Palace on the corner of the Pincian Hill (?)	ib.	The Amphitheatrum Castrense	90
The Muro Torto	ib.	Wall of the Lateran Palace	ib.
The work of Sylla	88	Wall of Claudius	ib.
Scheme of Julius Cæsar	ib.	Transtyberine Region	ib.
Work of Augustus	ib.		

THE LATER FORTIFICATIONS.

THE POMÆRIUM OF THE REPUBLIC AND EMPIRE.

Extension of the Pomœrium	91	These Cippi of the time of Augustus, Hadrian, and Trajan	94
According to Aulus Gellius, Vo- piscus, and Tacitus	92	The Emporium enclosed by Clau- dius	96
Boundaries enlarged by Claudius	93	Apollinaris Sidonius mentions Po- mœria, A.D. 467	97
The Cippi, with Terminal Inscrip- tions	94		

APPENDIX ON THE POMÆRIUM.

Northern Boundary of the City	98	Limits of the Pomœrium marked out by Cippi	100
Pomœrium of the Emperors	99	Very few of these remaining	ib.
The Cippi, Termini, or Boundary Stones of the Pomœrium	ib.		

POMÆRIUM OF AUGUSTUS. CIPPI.

- | | |
|---|--|
| <p>1. A Cippus of 21st year, found outside of the Porta Flaminia, or Del Popolo . . . 100</p> <p>2. A second Cippus of the same date, found near it . . . 101</p> <p>3. A third of the same period, at the Vatican . . . ib.</p> <p>4. A fourth, at the Altieri Palace . . . ib.</p> <p> All these mention Terminations but not Enlargement . . . ib.</p> <p>5. A fifth found at the "Trinita de Monti," as stated by Muratori, and</p> <p>6 — are of doubtful authority . . . 102</p> | <p>7. Pomœrium of Claudius, Cippus of, A.D. 49, at S. Lucia . . . 103</p> <p>8. Cippus found near the Porta Metronia . . . 104</p> <p>9. Pomœrium of Vespasian, Cippus found near the Porta Ostiensis, or de S. Paolo . . . 105</p> <p> Replacement of the Termini of the Pomœrium by Hadrian . . . 105</p> <p>10. Cippus of A.D. 121, found in 1867, and still remaining on its original site in the cellar of a house . . . 106</p> |
|---|--|

	PAGE		PAGE
11. Cippus at the Vatican (the same as No. 3 ?)	106	These Cippi conclusive evidence that the limits of Rome in the time of Augustus and Claudius were nearly the same as in the time of Aurelian	106
12. Cippus found near the Collegio Romano	ib.		
The superintendence of the Pomœrium belonged to the College of the Augures	ib.		

CHAPTER II. SECTION II.

THE GATES OF ROME IN THE TIME OF VESPASIAN.

The passage in Pliny's "Natural History"	107	9. Porta Asinaria, closed, but nearly perfect	112
The thirty-seven Gates of Rome explained by the inner and outer walls, and the measurements shewn to agree	108	10. — Lateranensis, closed, but visible	ib.
The line from the Milliarium Aureum to each gate :—		11. — Metronia, closed, but visible	113
1. Porta Aurelia at the Hadrianum	109	12. — Latina, closed, but perfect	ib.
2. — Flaminia, or del Popolo .	ib.	13. — Appia, now di S. Sebastiano	ib.
3. — Pinciana, now closed, but perfect	110	14. — Ardeatina, closed, but nearly perfect	ib.
4. — Salaria, destroyed in 1871	ib.	15. — Ostiensis, now di S. Paolo	114
5. — Nomentana, outside of the Porta Collina	111	16. — Portuensis, on the road to Porto	ib.
6. — Chiusa, at the Prætorian Camp	ib.	17. — Janiculensis di S. Pancrazio	ib.
7. — Tiburtina, or di S. Lorenzo	ib.	18. — Septimiana in Trastevere	115
8. — Maggiore	112	The twelve <i>passed through</i> are not to be counted twice over . . .	ib.
		The seven which had <i>ceased to be</i> .	116

CHAPTER II. SECTION III.

HISTORICAL NOTICES OF SUCCESSIVE REPAIRS OF THE WALLS.

Wall of Aurelian	118	The City again burnt by the Vandals under Genseric, A.D. 455 .	122
Authorities for it	ib.	Walls restored by King Theodoric, c. A.D. 500	ib.
Change in the mode of attack and defence	119	Again seriously damaged by the Goths, A.D. 537	ib.
High Walls and Towers required .	ib.	And again by them under Totila, A.D. 552	ib.
The Wall built upon the outer Moenia	120	Hastily repaired by Belisarius, A.D. 560	123
Gates fortified by Honorius, A.D. 403	121		
The Siege by the Goths under Alaric, A.D. 409	ib.		

	PAGE		PAGE
Again damaged by the Lombards, c. A.D. 720	123	Emperor Henry IV., the Leo- nine City dismantled	126
And repaired under the Popes, as recorded by Anastasius	ib.	Robert Guiscard and the Normans support him	ib.
In the eighth century, by Sisinius, Gregory II. and III., Hadrian I.	124	Description of the Walls by William of Malmesbury	ib.
In the ninth century a minute de- scription of this wall is given in the <i>Itinerary</i> of Einsiedlin	ib.	Part of the Wall restored by the Senate, A.D. 1157	127
In 848—852 the Walls of the Leo- nine City were built by Leo IV., to protect the Vatican	125	Description of the Walls by Mar- tinus Polonus, and in the <i>Mira- bilis Urbis Romæ</i>	128
Leo IV. also repaired the other walls and the Gatehouses	ib.	A.D. 1400. Wall near the Janicu- lum falls down	129
Ceremonial at the opening of the Leonine City	ib.	A.D. 1404. Porta del Popolo first mentioned	ib.
The Leonine City taken by sur- prise, A.D. 1063	ib.	A.D. 1407. Wall near the Monte Testaccio destroyed by the Savelli	ib.
Pope Hildebrand besieged by the		A.D. 1431. Bracciolini measures the walls	ib.

CHAPTER II. SECTION IV.

CIRCUIT OF THE WALLS.

1. From the Gate of S. Peter to the Porta Flaminia	130	7. From the Porta Prænestina to Porta Asinaria	142
2. From the Porta Flaminia to Porta Pinciana	132	The Amphitheatrum Castrense	ib.
3. From the Porta Pinciana to Porta Salaria	134	The Vivarium mentioned by Procopius	143
4. From the Porta Salaria to Porta Nomentana	135	8. From the Porta Asinaria to Porta Metronia	144
5. From the Porta Nomentana to Porta Tiburtina	136	Wall of Aurelian in this part ceases on the western side of the Porta Asinaria	ib.
The Prætorian Camp	137	A piece of bad wall of the time of Belisarius, for thirty yards across the foss of the Lateran	144
6. From the Porta Tiburtina (S. Lorenzo) to Porta Prænestina (Maggiore)	138	The Porta Lateranensis and Wall of the Lateran Palace	145
The Aqueducts here part of the Walls	139	9. Porta Metronia to Porta La- tina	146
Porta Tiburtina—One of the Gateway Fortresses of Ho- norus, A.D. 403	ib.	10. Porta Latina to Porta Appia	ib.
Porta Maggiore of the time of Claudius, A.D. 40	ib.	Porta Appia rebuilt by the Ex- archs of Ravenna (?), or by King Theodoric (?)	147
The fortifications of Honorius destroyed in 1838	140	Towers built of marble from the Temple of Mars	ib.
The Baker's Tomb then brought to light	ib.	Letters of King Theodoric	148
		11. Porta Appia to Porta Ostiensis	149

	PAGE		PAGE
Porta Ardeatina and Bastion of San Gallo	149	14*. From the River Tiber to the Gate of S. Peter	152
12. Porta Ostiensis to the Tiber . ib.		THE HADRIANUM	153
THE TRASTEVERE.		An attack upon this fortress described by Procopius	155
12*. From the River Tiber to the Porta Portuensis	150	Porticus of S. Peter	156
13. From the Porta Portuensis to Porta Aurelia (S. Pancrazio) . ib.		Medieval Fortification of the Hadrianum or Castle of S. Angelo	157
14. Porta Aurelia to the Tiber . 151		The Leonine City	158
Porta Septimiana	ib.	Gates of the Leonine City	159

APPENDIX TO CHAPTER II. SECTION V.

NAMES OF THE GATES	161	Porta Appia	168
The same name applied to two gates, one in the inner wall, the other in the outer <i>manica</i>	162	In the Corridor of Aurelian near the Gate, a painting of A MA- DONNA, c. A.D. 520	ib.
Porta Aurelia and Hadrianum	163	The Vatican, its extent	169
— Flaminia, Tomb of Nero	164		

APPENDIX TO CHAPTERS I. AND II.

On Primitive Fortifications, Walls and Gates	171	Via Appia Nova	182
Ancient Streets and Roads	ib.	— Asinaria and Lateranensis	183
— Originally made in the Trenches of the Earthworks	ib.	— Labicana, Road to Labicum	184
Great number of these trenches in Rome	172	— Prænestina, Road to Præneste, now Palestrina	185
These deep holes were filled up	173	— Tiburtina, Road to Tibur, now Tivoli	187
Streets in the City. The Forum	174	— Nomentana, Road to Nomen- tum, now Mentana	188
Roads outside of the Wall of Ser- vius Tullius, or in the suburbs	177	— Salaria	ib.
Via Ostiensis, or Road to Ostia	178	— Flaminia	189
— Laurentina, or Road to Lauren- tium	179	— Aurelia	ib.
— Ardeatina, or Road to Ardea	ib.	— Vitellia	ib.
— Appia, the great Road to the South	180	— Cornelia	190
— Latina, Road to Tusculum, &c. . . .	182	No exaggeration in the account of the Roman Roads by Strabo, Dionysius, and Statius	191

CHAPTER II.

SECTION I. EXTENSION OF THE FORTIFICATIONS MADE BY SYLLA AND THE EARLY EMPERORS.

No additional space seems to have been enclosed either by walls or earthworks, from the time of the Kings until the time of Sylla, B.C. 80. His work appears to have consisted in continuing the line of fortification along the bank of the Tiber, from the point where the Pulchrum Littus ceases, to the northern extremity of the Campus Martius; in fact, to the point where the present wall of Aurelian joins the Tiber. Portions of towers of his period may be seen from a boat, or from the opposite shore when the water is low; they are built of the rough stone concrete usual in his time, similar to the walls of the Emporium, which is a dated example. The foundations of these towers, to whatever period they belong, have certainly been used as substructures for medieval castles and modern houses, and have thus been preserved.

From the Tiber to the Porta Flaminia, we have no traces of work of the time of Sylla, but beyond this it commences again. There is reason to believe that he erected his new principal fortress or palace on the Pincian Hill, and it was in all probability at this corner, where the great wall of his time against the cliff remains both to the north and to the east. To the north it is the celebrated Muro Torto, or the *distorted wall*, which originated in this manner; the architect began naturally by building a flat wall against the face of the cliff to keep up the earth, but the pressure proved too great for the foundation, and the wall leaned over as we still see it, so as to look very dangerous; but after trying it for a year or two, finding that the settlement went no further, he boldly carried up the remaining half of the wall, only he took the precaution of building it in a series of semi-circular recesses or large niches. This upper part of the wall is perfectly vertical; it is the lower half only, which is flat, that leans over.

This appears to have been a lesson to them, and the rest of their high wall on the east side is built in niches, in two series, one above the other^a. The character of the whole work is of the time of Sylla,

^a This very interesting, curious, and picturesque part of the Wall of Rome is now entirely hidden by a hideous flat modern wall, as ugly as it well could be contrived. It can be seen at once in the photograph of the Historical series taken before it was concealed.

that is, a few years before the time of Augustus. The small pieces of tufa with which the wall is faced at the angles are cut nearly into the shape of modern Flemish bricks, not the long thin hard brick or tile of the first century, but looking at first sight like a modern brick wall, only these blocks of tufa are rather larger than modern English bricks; the real internal construction is a mass of concrete.

The work of Sylla probably terminated at the angle where the "Belvedere," made by the Medicis, now stands on a lofty mound. At this point there is evidently a joint in the construction of the work, indicating an interval in its progress. The wall, however, is still built against a scarped cliff as far as the Porta Pinciana, after which the ground on both sides is more nearly level, and traces of a wall, with square stone towers of this period, are visible beneath the brick wall of Aurelian, which is erected upon them. The wall of this part of the *agger* is neither a mere concrete foundation, nor is it a finished wall intended to be seen; it was no doubt originally covered with earth to some height, and is so still in places where it has not been disturbed. The stonework is visible in the gardens of the Villa Ludovisi, where it is ten or twelve feet above the level of the soil, standing on a bank, with the foss very distinct inside, some ten feet deep.

Julius Cæsar is said to have formed a grand scheme for enlarging the boundaries of the city, by turning the course of the Tiber under the Vatican Hill, and making a new Campus Martius in the meadows at the foot of it; but his premature death put an end to this and other plans for the improvement of the city. Probably its enclosure by Sylla, and the number of buildings erected upon it, had rendered the old Campus Martius no longer available for its original purpose, as exercising ground for the army. This emperor, however, seems only to have carried on the work begun in the time of Sylla, by continuing the new line of fortifications at the north end of the Campus Martius, some distance further to the east, probably to about the site of the Porta Salaria. It is impossible to distinguish his work from that of his successor, both probably being similar as to construction, and both having been repaired, raised, built over or faced, as occasion required, in the time of Aurelian.

In all probability Augustus completed the work of Julius Cæsar where left unfinished, and continued the line at least as far as the Porta Tiburtina (now S. Lorenzo), where a gateway of this period remains, with the inscription upon it relating to the aqueducts. The part of the *agger* from the Porta S. Lorenzo to the Porta Maggiore must have been made at an earlier period, for the aqueducts were

carried upon it, including the Aqua Marcia, which was made about a hundred and fifty years before the time of Augustus. The inscription on the arch at the northern end of it, already referred to, records its repair by the early emperors, evidently of a work previously existing.

Beyond the Porta Maggiore there were also banks belonging to ancient aqueducts and the fortification of the Sessorium. There was no reason why Augustus should disturb these, but the promontory containing the first Regio (Rome having been divided into fourteen *Regiones* in his time) is surrounded by a wall, which wall contains here and there work of an earlier period than that of Aurelian, and quite as early as the time of Augustus.

The reign of Tiberius has left us the *Castra Prætoria*, which is a projection from the line of the fortifications, probably built upon an old earthwork. The construction of the north wall is of the admirable brickwork of the first century; that of the south wall is chiefly of the large split stones of the time of the Kings, evidently taken from some other place and used again; but not likely to have been carried far on account of their weight. The eastern side of the camp has been for the most part rebuilt in the fourth century, after the fortifications had been dismantled by Constantine in consequence of the rebellion of the guards, but what remains of the older work agrees with the brickwork of the time of Tiberius. In the angle formed by the connection of the south wall of the camp with the main wall stands a closed gate, which in the absence of any distinct name is called the "*Porta Chiusa*." The interior of this gate shews construction of earlier work, although the exterior is faced with the cut stone of Honorius.

As has been said, on the eastern side of Rome the work of Augustus cannot be traced beyond the *Porta Tiburtina*. Between this and the *Porta Maggiore* the bank and the aqueducts were probably considered by both Augustus and Tiberius to afford sufficient protection, and not to require any new wall, at least no work of their time is visible.

When we reach the *Porta Maggiore* we find that Claudius formed an important fortification by his aqueduct from the tower at the corner on the north side of that gate, along the two sides of the angle formed by the wall on the south side, and thence to the extreme eastern corner of the *Sessorium*. At this point it seems to have met some existing fortifications, as in the repaired wall of Aurelian in this part: traces of older structures of the time of the Kings are plainly visible.

The Amphitheatrum Castrense, forming part of the wall, is of brickwork of about this period, but whether belonging to his reign or that of his successors is a doubtful question^b. Between the Sessorium and the angle at which the Porta Metronia stands there are stone towers of an age which may be that of Claudius or earlier. The walls of the Lateran Palace, too, form an important part of the fortification in this direction.

Passing round the promontory (the enclosure of which we have assumed to be the work of Augustus) and meeting the old line of the Kings on the south side of the Pseudo-Aventine, we find again the work of Claudius. He seems to have enclosed the large space of ground which lies on the south of the Aventine, as hitherto the Emporium and the other great commercial storehouses had been outside the walls. The wall of Claudius was, like the walls of Sylla and Augustus, made use of as the substructure of the wall of Aurelian as far as this wall reached. Where the wall of Aurelian ceases the wall of Claudius is still to be seen when the water is low, extending along the eastern bank of the Tiber for some distance. It probably went as far as the Emporium only.

With regard to the Transtiberine region, as it clearly formed one of the *Regiones* of Augustus, there is every probability of its having been enclosed by a wall in his time. It is true that there is not the same evidence which is seen in other parts of the wall of Aurelian having been built on a former wall, but this probably arises from the very imperfect remains which we possess on account of the destruction by the Goths. Were the wall as perfect here as in some other parts, there is reason to think that the same evidence of two different periods would be visible.

^b The wall of Aurelian passes in a straight line behind this building, which was used as an outwork, and therefore there are neither towers nor corridors in the inner wall, but the brickwork is

of his time. The space between the outer wall and the inner one appears to have been used as a trap for the Goths by Belisarius, as admirably described by Procopius.

THE POMÆRIUM OF THE EMPIRE.

IT is to be noted that in the ancient writers there is scarcely any mention of the extension *of the walls* of Rome. As has already been mentioned in previous sections, we read of *the extension of the pomærium* by certain emperors, who had obtained the privilege of doing so by their conquests abroad; but it does not necessarily follow (though in some cases it was so) that they extended or rebuilt the fortifications.

Although the word *pomærium*, as we have contended in previous sections, was evidently used *in the time of the Kings* to signify a part of the fortification, or rather the strip of land on each side of the wall necessary for its defence, it is equally clear that at the time of the Empire it had come to signify the boundary of the jurisdiction of the city proper, just as in London, Lud-gate, with its foss (the Fleet), was in the line of the original western boundary of the city of the Norman kings, both as regards its defences and its jurisdiction; but four or five centuries afterwards Temple Bar marked the western boundary of the jurisdiction of the city, without reference to the defences, or having any foss on the outside. In Paris the boundaries of the city for the *octroi* duties at different times have had little reference to the fortifications, although of course at first they were the same. The ancient laws of Rome by which no one was allowed to build upon the space set apart for the *pomærium*, seem during the Republic to have become obsolete, and the religious ceremonies which were supposed to render the ground sacred to have fallen into neglect. Hence when we read of additions to the "city" after the time of the Republic, it does not follow that it is to be interpreted as it was during the time of the Kings, and that it means the fortifications were extended. It was still a privilege which only certain rulers could avail themselves of, and it was no doubt an important one, and possibly the act was attended with ceremonial, but it had lost much of its former significance. The "extension of the *pomærium*" by Augustus, Claudius, Trajan, Nero, and Aurelian, mentioned by classical writers, clearly then refers to the municipal jurisdiction, and we need not now look for alterations in the line of the walls of *enceinte* to agree with these records.

It will be well to call to mind the passage in Aulus Gellius, who (writing about A.D. 140) devotes a short chapter to answering the

question, "What is the *pomærium*?" He begins with the definition from the books of the Roman Augurs, which has already been given in this book. He there speaks of the *pomærium* of Romulus, which was bounded by the lower extremities of the hill-slopes of the Palatine, but which, with the increase of the number of people, was from time to time carried forward till it included several hills. He then says:—

"But only those who increased the number of the Roman people, by capturing land from the enemy, had the right of advancing the line of the *pomærium*.

"(4.) Wherefore it has been asked, and is still asked, why the Aventine alone, out of the seven hills of the city, should be outside the *pomærium*, when the other six are within it, considering that this hill is not far off, nor thinly inhabited. For neither King Servius Tullius, nor Sylla, who had obtained the right of advancing the line of the *pomærium*, nor even afterwards the divine Julius, when he did advance the *pomærium*, included it in the prescribed boundaries of the city.

"(5.) Messala points out what seem to have been some of the reasons of this circumstance, but out of all of them there is only one with which he is satisfied, namely, that it was because on that hill, Remus, when he took the auspices before beginning to build the city, found the birds of omen of no avail, and so Romulus had the advantage over him.

"(6.) 'Therefore,' says he, 'all those who have pushed forward the line of the *pomærium*, have excluded that hill, because it was made unlucky by the birds of evil omen.'

"(7.) But I have not thought it well to pass over what I lately met with, concerning the Aventine, in the Commentary of the old grammarian Elis, in which it is written 'that the Aventine, which first of all was excluded, as we have said, was afterwards included, by the authority of the divine Claudius, and so considered within the boundaries of the *pomærium*.'"

There is a passage also worth quoting in the Life of Aurelian, by Vopiscus, who wrote about one-hundred-and-fifty years after Aulus Gellius:—

"When these matters were concluded, on the advice of the senate, he (Aurelian) *extended the walls* of the City of Rome, but it was not then that he *added to the*

^c "Propterea quæsitum est, ac nunc etiam in quæstione est, quam ob causam ex septem urbis montibus, cum ceteri sex intra pomærium sint, Aventinus solum, quæ pars non longinqua nec infrequens est, extra pomærium sit: neque id Ser. Tullius rex, neque Sulla, qui proferundi pomærii titulum quæsit, neque postea Divus Julius, cum pomærium proferret, intra effatos urbis fines incluserint. Hujus rei Messala aliquot causas videri scripsit; sed præter eas omnes ipse unam probat, quod in eo monte Remus urbis condendæ gratia

auspicaverit, avesque irritas habuerit, superatusque in auspicio a Romulo sit: *Idcirco, inquit, omnes, qui pomærium protulerunt, montem istum excluserunt, quasi avibus obscænis ominosum.* Sed de Aventino monte prætermittendum non putavi, quod non pridem ego in Elidis, grammatici veteris, commentario offendi: in quo scriptum erat, Aventinum antea, sicuti diximus, extra pomærium exclusum, post auctore Divo Claudio receptum, et intra pomærii fines observatum." (Aulus Gellius, Noct. Att., lib. xiii. c. xiv. 4—7.)

pomærium, but afterwards. For it is not permitted that any of the Emperors should add to the *pomærium*, unless he has enriched the Roman State by wresting some portion of territory from the barbarian. Augustus, however, made additions, so did Trajan, and so did Nero, under whose rule the Pontus Polemoniacus and the Cottian Alps became tributary to the Roman sway^d.”

A passage in Tacitus should likewise be taken in connection with the two foregoing extracts. The passage in question precedes the incidental mention of the tradition respecting the *pomærium* of Romulus round the Palatine, which has already been discussed in a previous section.

“And the people of Ituræa and Judæa, on the death of their kings, Sohæmus and Agrippa, were annexed to the province of Syria. It was agreed that the auguries for the good of the state, which for five-and-twenty years had been neglected, should be performed and henceforth continued regularly. And the Emperor (Claudius) added to the *pomærium*, according to the ancient rites, which permit only those who have added to the empire, to add to the boundaries of the city. None, however, of the Roman captains, although they have subdued whole nations, have exercised the privilege except Sylla and the divine Augustus^e.”

Then follows the history of the first building of Rome, and of the institution of the rite. The section concludes :—

“Afterwards, as [Rome’s] prosperity, so her *pomærium* was increased. The boundaries which Claudius then fixed can easily be ascertained, and are registered at length in the public records^f.”

From the above extracts, then, we gather, first, that the pretext for this was not because the Aventine required fortification, or because it was not fortified, that it was included within the *pomærium*, but wholly on superstitious grounds, the advancement of the *pomærium* being a religious rite. Secondly, that though Aurelian advanced the line of the walls, as well as the *pomærium*, one did not involve the other, as they were each done at separate times, and were quite distinct. Thirdly, that in the time of Claudius a rite which had fallen out of use was revived for the “good of the state,” and the

^d “His actis . . . adhibito consilio Senatus, *muros* urbis Romæ dilatavit ; nec tamen *pomærio* addidit eo tempore, sed *postea*. Pomærio autem nemini principum licet addere, nisi ei qui agri Barbarici aliqua parte Romanam Rempublicam locupletaverit. Addidit autem Augustus, addidit Trajanus, addidit Nero, sub quo Pontus Polemoniacus et Alpes Cottix Romano nomini tributæ.” (Vopiscus in Vita Aureliani, c. 21.)

^e “Ituræique et Judæi, defunctis regibus, Sohæmo atque Agrippa, provinciæ Syriæ additi. Salutis augurium,

quinque et viginti annis omissum, repeti, ac deinde continuari, placitum. Et pomærium auxit Cæsar, more prisco ; quo iis, qui protulere Imperium, etiam terminos urbis propagare datur. Nec tamen Duces Romani, quanquam magnis nationibus subactis, usurpaverant, nisi L. Sylla et divus Augustus.” (Taciti Annales, lib. xii. c. 23.)

^f “Mox pro fortuna pomærium auctum. Et, quos tum Claudius terminos posuerit, facile cognitum et publicis actis perscriptum.” (Ibid., c. 24.)

boundary properly recorded in the Public Records. Unfortunately these records do not exist, but we are not wholly without some information on the subject, as besides the registration in documents, there were boundary-stones placed (just as we often do in these days with regard to landed property) to mark the line, and some of these have been found with their inscriptions.

They also confirm what has been said, as they are near no remains of any wall or fortification, nor in such a position as to give reason to suppose a wall ever existed along the line where they have been found.

It is true that there may be reason to suppose that a trench was dug, in which the *cippi* were placed, (for they do not seem to be in the line of streets, and are found low down in the cellars); and a bank was thrown up within the trench, but this was rather a line of demarcation than an earthwork for defence.

Of the terminal inscriptions which have been discovered, one is of the time of Asinius and Gallus, consuls in the year A.U.C. 746, or B.C. 6; a second, of Augustus, in the seventeenth year of his power as Pontifex Maximus, or A.D. 7; a third, of Claudius, in his eighth year, or A.D. 49; and a fourth, of the time of Hadrian^g. This last exists in its original position in the cellar of a house about twenty feet below the present surface of the ground.

There is a passage in Vopiscus which has been thought to refer to the placing of these *cippi* in a foss.

“After Trajan had conquered the Dacians, he made a foss from the Quirinal to the Tiber to enclose his forum and temple.”

It is most improbable that this foss had any relation to the fortifications, and therefore it is supposed that it refers to the extension of the jurisdiction of the city, so as to include Trajan's Forum and Temple.

It has been attempted to trace certain lines following the course of the streets, and passing the few *cippi* which have been found, but the evidence is very unsatisfactory: and when we examine the authorities already adduced, we are met by difficulties, even in the slight information which they afford. The following points, however, may be worth attention.

The two kings, Tarquinius Priscus and Servius Tullius, who, together, did perhaps more towards fortifying Rome than any two successive rulers, either before or after them, are not mentioned in the three lists of those who *advanced the pomærium* of the city.

^g See the Appendix to this Section.

Aulus Gellius, it is true, says that Servius Tullius was entitled to the privilege, but it is distinctly implied he did not avail himself of it, because those two kings formed the City by uniting the seven separate fortresses in one general line of enclosure.

Sylla is said by Aulus Gellius to have had the right also, but Tacitus says that he exercised it. This is singular, because Aulus Gellius wrote his book some thirty years after the latter was written, and could have referred to it. If Sylla added to the *pomærium*, we should venture to think that it was in the direction of the Cœlian, and that it was the Lateran Palace which stood upon the detached hill of the Cœlian, (probably the "Cœliolum," as has already been hinted). We know it was not in the direction of the Aventine, while in the northern part of Rome we have, in the succeeding notices, sufficient to account for the probable extension in that direction. At this period it is probable that the extension of the *pomærium* involved connecting the fortifications of the hill to the east of the Cœlian with those of the Cœlian itself, and there is work in this part which would well agree with this age, though subsequent repairs and rebuilding have rendered it impossible to speak with any certainty as to the purpose or extent of the few remains of this early masonry which there exist.

Julius Cæsar, according to Aulus Gellius, was the next who extended the *pomærium*. According to Tacitus, Augustus, (and *not* Julius Cæsar by implication). With such slight and, indeed, contradictory evidence it may seem useless to hazard a conjecture, but there are some points in the history of the line of *enceinte* of Servius Tullius to which we have referred already, and which seem not wholly unconnected with the question at issue. As already explained, the line of the *agger* which formed the boundary of the City between the Capitol and the Quirinal is usually placed to the north of the Forum of Trajan. It has already been suggested that it more probably followed a line considerably to the south of this, and some remains of a tower, or fortification of some sort, has been pointed out as existing beneath the Torre de' Conti. This is almost in a line with the south side of the series of Fora, which extend to the north for some distance beneath the cliff of the Quirinal Hill. If, then, this was the line of the *agger* of Servius Tullius and the boundary of the *pomærium* (as at this time we believe them to be identical) the Forum of Julius Cæsar would be without the city. It is only natural that he should include it within the city jurisdiction. His successor, however, extended this Forum, and one half (the western) went by the name of the Forum of Julius Cæsar, and the other (the eastern)

that of Augustus. If the *pomærium* was advanced to enclose these, it is not difficult to understand how the extension should be attributed sometimes to one sometimes to another.

Vopiscus also mentions Augustus as one of the emperors who extended the *pomærium*, and next names Trajan, (out of chronological order). Now we know the position of the Forum of Trajan, namely, just outside what would have been the previous boundary.

In the same way it is probable that this emperor wished to include his Forum within the precincts of the city, and this view is further confirmed by another passage from Vopiscus already quoted, which tells us that Trajan, in order to include his Forum, made a foss, &c.

In order of date, Claudius would come after Augustus. Aulus Gellius gives his authority for saying that this emperor extended the *pomærium*, while Tacitus gives it as an established fact. Vopiscus omits Claudian, but names his successor Nero, which the other two omit. We seem to have accounted for the extensions on the north side, and that of Claudian is expressly mentioned as regards the Aventine.

The increase in commerce, and the necessity for docks and custom-houses, had rendered it necessary for the Government to make use of the large plot of ground to the south of the Aventine Hill, where the Emporium was built. When Claudius enclosed this space with the wall, it was but natural that there should be a desire to include this part of Rome, which was being rapidly built over and inhabited, within the precincts of the city. The building of the wall did not by itself affect its relation to the city proper, but it is quite probable that the emperor, on the wall being complete, added the district with the customary rites. The objections to the ill-omened Aventine had either been forgotten, or were not heeded by the side of the commercial community which had sprung up beneath it. That it should be attributed by Vopiscus to his successor Nero cannot be explained, but we must remember that many of the great works in Rome bear the names of two successive rulers.

The last instance of the use of the word *pomærium* is probably that by Apollinaris Sidonius^h, who has left an account of his journey to Rome in A.D. 467. He tells us that he visited S. Peter's before

^h "Inter hæc patuit et Roma conspectui; cujus mihi non solum formas, verum etiam naumachias videbar epotaturus. Ubi priusquam vel *pomæria* contingerem, triumphalibus apostolorum liminibus affusus, omnem protinus sensi membris male fortibus explosum esse

languorem. Post quæ cœlestis experimenta patrocinii, conducti diversorii parte susceptus, atque etiam nunc ista hæc inter jacendum scriptitans, quieti pauxillum operam impendo." (Apollinaris Sidonius, lib. i. ep. 5, § 12.)

entering the *pomæria*; in other words, he entered Rome from the west, and on crossing the bridge entered the precincts of the sacred city.

The original purport of the ceremonies, and the uses of the institution had long ceased, and the word itself seems then to have gradually died out, and its origin and meaning to have been forgotten.

APPENDIX TO CHAPTER II., SECTION I.

NORTHERN BOUNDARY OF THE CITY.

THE short *agger* and wall of Servius Tullius from the Capitoline to the Quirinal Hill forms a ridge across the Via di Marforio, a little to the south of the tomb of Bibulus. In rebuilding a house on this ridge in 1866 (?), the tufa wall was found on the side next the Capitol; it crossed the street in a direct line with the south end of the Forum of Trajan, where his arch stood, which formed a gate. From that point the Via di Marforio is modern, and is carried over some of the subterranean chambers of the Mamertine Prison. The wall protected the north end of the prison, and may have made an angle to cover the east side before crossing the valley and foss to the Quirinal Hill.

There is no doubt that the great tufa wall, fifty feet high and twelve feet thick, that was used to enclose the Forum of Augustus, was a wall of the time of the Kings that stood there, and was made use of. This is proved by the travertine wall of one third the height which runs into it at a right angle, and forms the northern side of the Forum Transitorium, of the time of Nerva.

The southern side of that Forum was another tufa wall of the time of the Kings, now running under the backs of the houses on that side of the street, as far as the tufa fortress on which the Torre di Conti is built. A small part of this tufa wall, with a gate in it, was also used for the back of the portico of the Temple of Minerva, and has been brought to light by the removal of the marble casing behind the marble columns, and under the fine cornice and entablature, with the figure of Pallas or Minerva, that still remains. The lower part of these marble columns is buried to one third of their height by the filling up of the foss-way in which the Forum Transitorium had been made. This foss was part of the original fortifications, and extended round the castle. It is very visible again at the Arco dè Pantani, and the temple by the side of it, called the Temple of Mars Ultor on very doubtful authority.

It seems probable that these ancient walls belong to the outworks of the Capitolium Vetus, and may very well have extended to the south-west corner of the Quirinal, and have been afterwards made into a medieval castle, with several towers, of which the Torre di

Conti is one, and the Torre di Milizie is another. The cliffs of the Quirinal would be the protection on the other three sides.

POMÆRIUM OF THE EMPERORS.

Another conjecture is, that as the *pomœrium* was a slip of land, it must have had an outer and an inner boundary line, and that sometimes one was enlarged, at other times the other. In the time of Sylla the object was the better defence of the city, which was threatened with an attack, and he enlarged the *Mœnia*, or outer defence, and with them the outer line of the *pomœrium* which necessarily belonged to them. But these did not necessarily include it in the sacred precincts of the City in its limited sense, and did not affect the inner boundary line. In the time of the Emperors, the object was to enlarge these sacred precincts, to which special privileges were attached. Sylla, therefore, added the Pincian Hill to the defence of Rome, and perhaps added the large sort of peninsula, which forms the first *Regio*; his *cippi*, restored by Augustus, have been found in both these places, one near the Porta del Popolo at the north end, another near the Porta Metronia at the south end. The successive Emperors made trenches across this plain to the north of the Capitol, from the cliffs of the Quirinal to the Tiber, and placed the *cippi* in these trenches as we find them; one actually remains *in situ* twenty feet below the level of the soil, (as has been mentioned).

THE CIPPI, TERMINI, OR BOUNDARY STONES OF THE POMÆRIUM.

An ancient law, which the Romans probably had from the Etruscans, established the rule that no one should have the right to enlarge the *pomœrium* who had not enlarged the limits of the Roman territoryⁱ. Nevertheless none of the great generals of the time of the Republic exercised that privilege, notwithstanding the wonderful manner in which they had enlarged the Roman dominions by their numerous and brilliant victories. They feared to imitate the ambition of the Kings, so that after the time of Servius Tullius, the *pomœrium* was never extended until near the end of the Republic in the time of Sylla, as Tacitus mentions in the passage already referred to.

After the time of Sylla, this privilege was used by Julius Cæsar^k, by Augustus and Claudius^l, by Nero^m, Vespasian and Titusⁿ, Trajan and Aurelian^o. Hadrian replaced the *cippi* of the *pomæ-*

ⁱ Tacit. Annal., xii. 23.

^k Aulus Gellius, xiii. 14.

^l Tacit. loc. cit.

^m Vopiscus in Aurelian, 21.

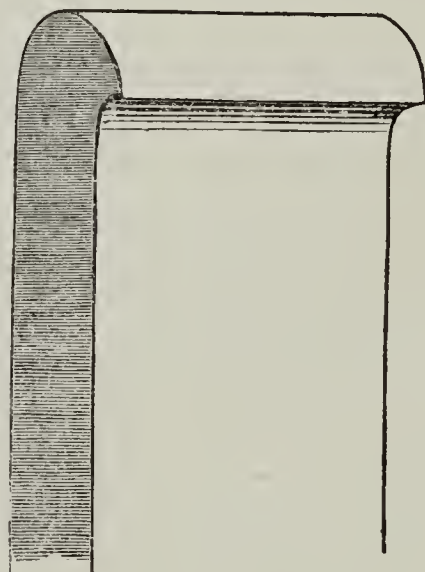
ⁿ Inscriptions.

^o Vopisc. loc. cit.

rium without enlarging it. In fact, he had not enlarged the boundaries of the Empire; on the contrary, he had reduced them, and had lost the greater part of the conquests of the great Trajan; he had abandoned Armenia and the other provinces situated beyond the Euphrates.

The limits of the *pomærium* were marked out by *cippi*, or boundary stones of travertine, placed at nearly equal distances all round the city. Each *cippus* had its proper number, and the distance from the nearest one, calculated in feet. In front, it had the inscription giving the name of the person who had enlarged the sacred limits of the city.

We have very few of these *cippi* remaining; it appears that, even in very early times, the sacred space of the *pomærium* was encroached upon by houses or other buildings, which concealed the *cippi* in such a manner that it was necessary to replace them, but probably the greater part of these stones still remain, buried in the foundations of the houses. They are of a peculiar shape as drawn by Boissard, having a sort of lip overhanging at the top.



The following are all the *cippi* that we know of as now remaining, or having been found *in situ*.

POMÆRIUM OF AUGUSTUS.

I.

C . MARCIVS . L . F . L . N .
CENSORINVS

C . ASINIVS . C . F . GALLVS
COS

EX . S . C . TERMIN .

Cajus Marcius, Lucii filius, Lucii nepos, Censorinus; Cajus Asinius, Caji filius, Gallus, consules; ex Senatus consulto terminaverunt.

This is of the year 746 of Rome, B.C. 8, and of the 21st year of Augustus, reckoned from the time when he received the Imperial purple.

This *cippus* is of travertine, 7 ft. high, 2 ft. wide, and 1 foot thick. It was found in the sixteenth century outside of the Porta Flaminia (or del Popolo), between the river and the Via Flaminia, but nearer to the river, and nearly isolated. It was carried to the garden of Cardinal Carpi near the Colosseum, now belonging to the monastery of the Mendicant Friars^p.

^p Gruter, p. 196, No. 1.

It is evident that this *cippus* was found on the site now occupied by the public *abbatoir* or slaughtering-place, and this indicates that in the time of Augustus, the outer boundary of the *pomærium* extended to the present wall at the north end.

II.

C . MARCIVS . L . F . L . N .
CENSORINVS . ET . C . ASI
NIVS . C . F . GALLVS
COS
EX . S . C .
FIN . POMER . TERMIN .

Cajus Marcius, Lucii filius, Lucii nepos, Censorinus et Cajus Asinius, Caji filius, Gallus, consules, ex Senatus consulto, fines pomerii terminaverunt.

This *cippus* was very similar to the previous one, with a slight difference in the inscription only; it had been placed in the same year, and was also found at the same time, as nearly as possible 600 feet from the former one, in the first vineyard towards the Tiber^a.

It appears from these two *cippi*, that, strictly speaking, Augustus did not *enlarge* the limits of the *pomærium*, he confined himself to recognising those limits, and replacing the boundary stones. In fact, in his will, where he enumerates exactly what he had done, he does not mention any enlargement of the *pomærium*, and yet he was considered one of the greatest men that Rome had ever produced.

In the collections of Inscriptions we find also the following :—

III.

IMP . CAESAR . DIVI . F
AVGVSTVS
PONTIFEX . MAXIMVS
TRIBVNIC . POTEST . XVII
EX . S . C . TERMINAVIT
R . PROX . CIPP . PED . CLXVIS

Imperator Cæsar, Divi filius Augustus, pontifex maximus, tribunicia potestate 17 ex Senatus consulto terminavit, recta proximo cippo ped. 166½.

B.C. 6 or 7^r. This was in the palace called Cesi in the Vatican, and was destroyed to enlarge the great church of S. Peter's.

IV.

Another *cippus* exactly similar to this in the courtyard of the Altieri Palace^s.

These two *cippi* were a year or two later than Nos. I. and II., and in these also there is no mention of enlargement. Augustus does not say AMPLIAVIT, but only TERMINAVIT.

^a Gruter, p. 196, No. 2.

^r Ibid., p. 196, 4.

^s Ibid.

He even says that he did this according to a desire of the Senate.
(EX. S. C.)

We find also the following *cippi*.

V.

IMP . CAESAR . DIVI . F
AVGVSTVS
PONTIFEX . MAXIMVS . TRIB
POTEST . XXXIV .
EX . S . C .
FINIBVS . POMERIVM . AMPLIA
VIT . TER . QVE

Imperator Cæsar, Divi filius Augustus, pontifex maximus, tribunicia potestate 34 ex senatus consulto finibus pomerium ampliavit, terminavitque.

A.D. 10 or 11. This is said to have been found at the "Trinità de' Monti."

VI.

IMP . CAESAR . DIVI . F
AVGVSTVS
PONTIFEX . MAXIMVS
TRIBVNIC . POTEST . XVII .
EX . S . C .
TERMINOS . POMERI
RESTITVENDOS . CVR

Imperator Cæsar, Divi filius Augustus, pontifex maximus, tribunicia potestate 17 ex senatus consulto terminos pomerii restituendos curavit.

According to the *cippus* No. V., it would appear that Augustus had drawn in the limits of the *pomærium* in the year 10 or 11 of the Christian era. Unfortunately these two *cippi*, V. and VI., came through the hands of the architect Pyrrhus Ligorius of the sixteenth century, a notorious forger of ancient monuments, and Dr. Henzen has demonstrated that we can have no confidence in these two inscriptions given by Muratori[†].

To sum up the question; Tacitus^u says that Augustus enlarged the *pomærium*, and he is followed by Vopiscus. The genuine inscriptions only mention the replacing of the terminal stones. The sacred formula for the enlargement of the *pomærium* was AMPLI-
AVIT . TERMINAVITQVE, as we see in the *cippi* of Claudius and Vespasian. Augustus does not use this formula, and further, in his will he does not mention the enlargement of the *pomærium*. Consequently it remains doubtful whether Tacitus was not deceived in confounding the enlargement with the re-establishment of the limits of the *pomærium*.

It is possible that Augustus, to avoid wounding the susceptibility of the people, was not willing to mention the enlargement

[†] See the *Bulletin de l'Institut*, An. 1851, p. 11, et An. 1858, p. 122.

^u Taciti Ann., xii. 23.

of the *pomærium*^x, and therefore mentioned only having replaced the termini. We can then reconcile the statement of Tacitus with the evidence of the terminal stones. However this was, it follows from the inscription cited that the re-establishment of the termini of the *pomærium* was begun in the year 746 of Rome, by the Consuls Censorinus and Gallus, according to a decree of the Senate, and was finished in the following year in the name of Augustus, but always according to a decree of the Senate.

The German conquests of Tiberius might have given Augustus the right to enlarge the *pomærium*.

With regard to the topography, the *cippus* found outside the Porta Flaminia near the Tiber, proves to us that Aurelian did not enlarge the boundary of the City in that direction beyond the limits of Augustus.

The *cippus* of Augustus, which, according to Gruter, was found in the Altieri palace, was probably found in the foundations, and it may indicate the line of the *pomærium* of Augustus in that direction. But the one found in the Vatican amounts to nothing, for there was in that palace a celebrated collection of inscriptions and other antiquities, of which the *cippus* in question may have formed part, and so have been brought there from some other place.

VII.

POMÆRIUM OF CLAUDIUS.

TI . CLAUDIVS	
DRVSI . F . CAISAR	
AVG . GERMANICVS	
PONT . MAX . TRIB . POT .	
VIII . IMP . XVI . COS . III .	
CENSOR . P . P .	
AVCTIS . POPVLI . ROMANI	
FINIBVS . POMERIVM	
AMPLIAUIT . TERMINAQ .	
V	V

Tiberius Claudius, Drusi filius, caesar, augustus germanicus, pontifex maximus, tribunicia potestate 9, imperator 16, consul 4, censor, pater patriæ—auctis populi romani finibus pomerium ampliavit terminavitque, No. 5.

A.D. 49. Panvinus tells us that this *cippus* was found in the *cloaca* or drain of S. Lucia, and it remains very near the same site, for it is inserted into the wall of a house in the neighbourhood of the Via del Pellegrino, in the place of Santa Lucia, No. 146.

This inscription is very remarkable. In the first place the solemn formula is employed by which the enlargement of the *pomærium* was distinguished: this formula we find exactly repeated in the *cippus* of Vespasian and of Titus. Then it is remarkable for the use of the digamma ʒ in place of the v as a consonant. Priscian, the grammarian, informs us that the Emperor Claudius (being learned

^x “Regum in eo vel ambitio, vel gloria.” (Tacit. loc. cit.)

in philology and in antiquities) had substituted the *Æolic* digamma for the consonant *v*. He had done this in order that there might be a distinction between the *v* as a vowel and the *v* as a consonant. For example, the word *divus* in Latin characters became *DIVVS*, the first *v* being a consonant, and the second a vowel. Then, according to the orthography of Claudius, it would have been written *DIÆVS*. This usage was observed during the reign of Claudius only; afterwards it was discontinued. Suetonius, in the life of that Emperor, informs us that he had added three letters to the Roman alphabet.

The victories of Claudius in Britain and Germany had given him the right to enlarge the *pomœrium*.

VIII.

A *cippus* similar to the previous one, but more exactly copied, is given by Muratori (p. 444, No. 4). He says it was found in 1729 on the *Cœliolum*. It must be remembered that the antiquaries of that period, called *CÆLIOLVS*, the small hill near the *Cœlian*, which extends towards the *Porta Latina*, now called *Monte d'Oro*. Consequently this *cippus* is the same as that which Ficoroni says was found near the *Porta Metronia*.

The two *cippi* of Claudius attest that the enlargement of THE CITY had not been great (at least not in the part to which these *cippi* belong), between that period and the latest *enceinte*, that of Aurelian. For from the eminence called *Cœliolus* to the wall of Aurelian is but a short distance. It is about the same as separates the place of *S. Lucia della Chiavica* from the bridge of *S. Angelo* or of *Ælius*. It is well known that the walls of Aurelian, carried along the bank of the *Tiber*, went from the *Porta Flaminia* to that bridge.

The cipher *v̄* in the *cippus* No. 5, represents the *ordinal* of that *cippus*. Perhaps it was also the distance between that and the one nearest to it, but that has not been copied. That distance was as near as may be a *jugerum*, that is to say, 140 feet.

POMÆRIUM OF VESPASIAN.

IX.

IMP. CAESAR
VESPASIANVS. AVG. PONT
MAX. TRIB. POT. VI. IMP. XIII
P. P. CENSOR. COS. VI. DESIG. VII. ET
T. CAESAR. AVG. F
VESPASIANVS. IMP. VI
PONT. TRIB. POT. IV. CENSOR
COS. IV. DESIG. V. AVCTIS. P. R.
FINIBVS. POMERIVM
AMPLIAVERVNT. TERMINAVERVNTQ.

Imperator Cæsar Vespasianus Augustus, pontifex maximus, tribunicia potestate 6, imperator 13, pater patriæ, censor, consul 6, designatus 7, et Titus Cæsar Augusti filius Vespasianus, imperator 6, pontifex, tribunicia potestate 4, censor, consul 4, designatus 5, auctis populi romani finibus, cet.

This *cippus* is broken on the upper part; it was found in 1856, in the level plain between the Monte Testaccio, and the Porta S. Paolo. It was published by Dr. Henzen in the *Bulletin de Correspondence Archæologique*, An. 1857, p. 11. The restorations, distinguished by a different character, are supplied by him.

It is evident that the victories in Judæa had given Vespasian the right to enlarge the *pomærium*, or the *enceinte* of THE CITY. In fact, this right was conferred upon him on his coming to the throne. We have the text of the law called LEX . REGIA, by which the imperial power was granted to Vespasian. It is a bronze tablet preserved in the Capitoline Museum (in the hall of Faunus). The following is the exact formula by which the right of enlarging the *pomærium* is granted:—

VTIQVE . EI . FINES . POMERII . PROFERRE . PROMOVERE . CVM . EX . RE .
PVBLICA . CENSEBIT . ESSE LICEAT . VTI . LICVIT . TI . CLAVDIO . CAESARI
AVG . GERMANICO .

It must be remarked in a passage of this law that the enlargement by the Emperor Claudius is cited, and that of Augustus is not mentioned; why not? if he had really done so. For that of Nero we can understand the omission of his name; his memory had been condemned, consequently his name could not appear on any public monument. But why not have mentioned Augustus? The *pomærium* of Vespasian, of which the circumference is given in a well-known passage of Pliny^v, is found to approximate closely to that of the wall of Aurelian.

REPLACEMENT OF THE TERMINI OF THE POMÆRIUM BY HADRIAN.

X.

On one side, V	COLLEGIVM AVGV RV M . AVCTORE IMP . CAESARE . DIVI TRAIANI . PARTHICI . F . DIVI . NERVAE . NEPOTI TRAIANO . HADRIANO AVG . PONT . MAX . TRIB POT . V . COS . III . PROCOS TERMINOS . POMERII RESTITVENDOS . CVRAVIT	On the other side, P . CCCCLXXXX
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A.D. 121 and 122. “Collegium Augurum, auctore imperatore Cæsare divi Trajani parthici filio, divi Nervæ nepoti, Trajano Hadriano Augusto, pontifice maximo tribunicia potestate quinta, consule tertium, proconsule, terminos pomerii restituendos curavit.”

^v Plinii, N. H., iii. 5. 9.

This *cippus* was found in 1867, in the cellars of the house No. 18, in the place called Piazza Sforza Cesarini (near the Chiesa Nuova). This stone is still in its original site, only encumbered by the foundations of the house.

XI.

Another *cippus*, exactly similar to the last, remained in the sixteenth century in the Cesi palace on the Vatican². This is no doubt the same that is given by Panvinus, without any indication of the locality where it was found.

XII.

A third *cippus*, with the same inscription, was found in the eighteenth century, in digging the foundation to enlarge the convent of the monks of S. Silvester, of S. Stefano del Cacco, near the Collegio Romano.

In the last two instances, they have neglected to indicate the number, the order, and the distance from the nearest one to it.

Everybody knows that the superintendence of the *pomærium* belonged to the College of the Augures, because the "Auguria" and the "Auspicia" were taken in precisely the same sacred precincts. And when it was proposed to enlarge that space, it was still the Augures who performed the ceremony. Festus has even preserved the formula of prayers used on such an occasion.

For this reason Hadrian served in the college of the Augures, to assure the recognition of the *pomærium* and of his establishment of the terminal *cippi*.

We have thus seen that epigraphy supplies us with ten genuine inscriptions of the *pomærium*, and two doubtful or spurious ones, which are now generally condemned by the learned. Of the ten, we have the sites of seven only.

The general conclusion is, that the limits of Rome in the time of Augustus and Claudius were not materially different from those of Aurelian still in use. The inner line of the *pomærium* was advanced, but not the outer line. The variation was in the sacred precincts, not in the extent of the town. There is great probability also, from a careful examination of the earthworks and scarped cliffs on which the wall of Aurelian is built in many places, that the limits are the same as those of the outer *mænia* of the Kings.

² Gruter, 198, 1.

SECTION II.

THE GATES OF ROME IN THE TIME OF VESPASIAN.

AT this point in the history of the fortifications of Rome we have a singular piece of documentary evidence, which though consisting of only a few words, demands considerable attention. The well-known passage in Pliny's "Natural History^a," recording the result of a survey of Rome in the time of Vespasian, which has been considered by many to be inexplicable, loses much of its difficulty if taken as referring to the outer line of fortification.

It runs as follows:—

"Romulus left the city of Rome having three gates, or (if we credit those who give a larger number) four.

"When the Vespasians were Emperors and Censors, in the year of Rome from its building 827 [A.D. 74], its *walls* reckoned in circumference 13 millia 200 passus^b.

"Enclosing seven *Hills* it is itself divided into fourteen *Regiones*, with 265 cross-ways with altars.

"The space comprised by the same is such, that if a measure be taken running from the milliarium, erected at the top of the Forum Romanum, direct to each of the *gates* (which are at the present time thirty-seven in number), so that twelve shall only be counted once and seven of the old ones shall be passed by, which have ceased to be [gates], it amounts to 30 millia 765 passus.

"But to the end of the houses, together with the Prætorian Camps, the measure from the same 'milliarium' along the lines of *all the streets* amounts to somewhat more than 70 millia passus.

"If, however, any one adds the *height* of the houses, he would form a truly worthy estimate, and would confess that the size of no city in the whole world can be compared with it."

The fact of the outer wall being the line spoken of by Pliny in this description, apart from the archæological evidence of its exist-

^a "Urbem tres portas habentem Romulus reliquit, aut (ut plurimas tradentibus credamus) quatuor.

"Mœnia ejus collegere ambitu imperatoribus censoribusque Vespasianis anno conditæ DCCCXXVII. pass. XIII.M.CC.

"Complexa montes septem, ipsa dividitur in regiones quatuordecim, compita Larium CCLXV.

"Ejusdem spatium, mensura currente a milliario, in capite Romani fori statuto, ad singulas portas, quæ sunt hodie numero triginta septem, ita ut duodecim semel numerentur, prætereanturque ex veteribus septem, quæ esse desierunt, efficit passuum per directum XXX.M.DCCLXV.

"Ad extrema vero tectorum cum castris Prætoriiis ab eodem milliario per vicos omnium viarum mensura colligit paulo amplius septuaginta millia passuum.

"Quo si quis altitudinem tectorum addat, dignam profecto æstimationem concipiat, fateaturque nullius urbis magnitudinem in toto orbe potuisse ei comparari. Clauditur ab oriente aggere Tarquinii Superbi, inter prima opera mirabile," &c. (Plinii Nat. Hist., lib. iii. c. 9.)

^b A passus is 4 ft. 10½ in., English measure.

ence at that time, is also further rendered probable when we compute the measurements. They are so far in excess of the longest course which has ever been proposed for that of the line of Servius Tullius, that this is entirely out of the question. The circuit of the wall of Servius was at most 7 miles, or about one-half the space required by Pliny^c.

By measuring according to the scale on Nolli's large map, which for this may be thoroughly depended upon, we find the circuit of the wall of Aurelian from the south-west corner where it touches the Tiber, to the north-western corner where it again touches the Tiber, amounts to 7 millia 680 passus.

The length of the Tiber between these two points, following its course, and including the Pulchrum Littus, (which was probably sufficiently perfect to be reckoned as a fortification at the time Pliny was writing,) amounts to 4 millia 150 passus.

To these numbers must be added the circuit of the wall of the Regio across the Tiber. As already said, the fact of its being the fourteenth Regio of Augustus, (while fourteen *Regiones* are expressly mentioned by Pliny as being contained in the circuit,) renders it evident that it was included in the measurement. It was not fortified on the eastern side, i.e. that next the Tiber. But the remainder of the circuit, following the line afterwards adopted by Aurelian, gives 1 mille 400 passus.

These three together give a total of 13 millia 230 passus, which is so close to the 13,200 of Pliny that it leaves nothing to desire.

The mention of the fourteen *Regiones* of Augustus, affords also very clear evidence that the circuit was not that of Servius Tullius. Regio I. (Porta Capena) was, without doubt, outside this older circuit, as well as Regio V. and Regio XIV. (Transtiberina), and it is probable also that *Regiones* VII. and IX. were outside, while *Regiones* VI., XII., and XIII., were partially so.

Pliny next mentions the *Compita*. The streets have, of course, been so much altered, that any result which would be obtained from attempting to sum up these would only be most unsatisfactory as evidence, either on one side or the other. We then come to the great question of the *Gates*, and their determination depends upon the measurement from the Milliarium, which was placed in the Forum Romanum.

^c The expression used by Pliny is *ambitu*. This could not mean the road on each side of the wall. The measurement, however, of the circuit of the

probable course of this wall would be 6 miles 600 passus, which doubled would give the 13,200 passus exactly.

There are in all eighteen gates, or places for gates, in the circuit of the outer wall ; of these, all except No. 1 and 18, are *existing*, and of the existing gates nearly half still shew traces of work belonging to an earlier time than the wall of Aurelian, in which they are found.

To the following short account of each gate is appended a note of the probable course of the street or road to it from the Forum Romanum ; and the measurement of this distance is calculated according to the scale of Roman feet attached to Nolli's large map. An examination of this map shews, beyond any doubt, that the lines of very many of the older streets are practically preserved. In some cases it is evident that they pass through vineyards, and are so closed, but where there are ancient buildings which have been repaired from time to time, and especially ancient temples which have been turned into churches, or whose sites have been taken for this purpose, it is obvious that the roads to them, or passing by them, must have been retained. Some of the very straight streets are clearly modern, or rather of the time of Pope Felix V., but by exercising a little care, the lines of the old ways can be traced with tolerable accuracy.

I. PORTA AURELIA^d. There was without doubt a gate in the fortifications on the north side, probably at the end of the bridge called usually the Pons Triumphalis, situated at the bend of the Tiber, a little to the west of the modern bridge of S. Angelo. There is a gate also to which the name Aurelia seems to be given by Procopius, and mentioned as a stone's throw from the Mausoleum of Hadrian, but we have no evidence of an earlier name which would especially agree with this site.

Leaving therefore the name of the gate an open question, but being almost sure of its position, we have only to calculate the distance from the Forum Romanum along the most probable line of road.

“From the Forum Romanum, through the Piazza della Consolazione, and along the street of the same name, and past the church of S. Nicolas in Carcere, which was close to the Porta Carmentalis, then past the eastern side of the Theatre of Marcellus (to this point the line of streets forms still the boundary of the Rioni), thence to the Piazza di S. Maria del Pianto, the Piazza a Catinari, and the Piazza di Campo di Fiore, (leaving the theatre of Pompey on the right,) then following the boundary of the Rioni till it joins the Via Giulia, and thence to the remains of the Pons Triumphalis, gives a total of 1 mille 600 passus.

II. PORTA FLAMINIA, now the Porta del Popolo, must have been

^d See the Appendix to this Section.

made by Sylla, when he enclosed the Campus Martius, building a wall and towers along the bank of the Tiber, and a fortified palace for himself at the corner of the Pincian Hill to defend this point, as the most open to attack. Of this early gate there are no remains. It is even a doubtful question whether or not the site is exactly that occupied by the Porta del Popolo.

“The line of street northward of the Forum Romanum (Via di Marforio), in its northern part^e, marks probably the eastern foss of the Capitol. It passes through the site of the ancient Porta Ratumena, and then joins the modern Corso. For some distance this modern street follows the ancient Via Lata, but it is very doubtful what street led from the northern end of this to the city wall. If the old course was similar to the modern it would give 1,650 passus. If not, unless the line is totally obliterated, which is scarcely probable, it must have bent round to the eastward, and through the Piazza di Spagna; this would give nearly 1,850 passus. It may be safer to take the mean, and reckon . . . 1 mille 750 passus.”

III. THE PORTA PINCIANA.—The deep foss-way which leads to this indicates an early date, and would not have been made so late as the time of Aurelian, or Honorius. This gate remains quite perfect, but it has been rebuilt at a later period; the ancient foss-way within the gate has also some of the old pavement, but it is at a depth of about ten feet below the level of the soil in the gardens on each side, which is supported by walls.

“There was probably a road along the modern Via Bonella, which, after passing through a gate (?Porta Fontinalis) to the east of the Forum of Trajan, skirted the western base of the Quirinal Hill, following the course of the modern streets Via della Pilotta, through the Piazza di Trevi, to the Via della Stamperia, and thus forming an angle occupied by the Via dell’ Angelo Custode, and the Via di S. Giuseppe, close to which the street retains its old name, the Via di Porta Pinciana. The length of this line of streets is . . . 1 mille 500 passus.”

IV. THE PORTA SALARIA was^f outside the old foss of the city, in which the Circus of Sallust had been made; but this alteration was made before the time of Pliny, and the garden of Sallust (now of the Villa Ludovisi) had been included in the additions made by Sylla or by Julius Cæsar. Within this garden the interior of the wall is particularly perfect, and has already been described in a previous section.

“At the eastern end of the modern Via Bonella there was no doubt a way up into the Quirinal Hill (possibly along the Via del Grillo), and the modern Via del Quirinale and the Via di Porta Pia follow probably the line of an older

^e The southern part of this street is modern, passing over some of the chambers of the Mamertine Prison.

^f This gate was destroyed by the

municipal architect in 1871 as an improvement, and to shew the old tombs that had been built into it.

street, being the direct way to the Porta Collina, through which the road passes, before it branched off to the Porta Salaria. The distance along this line of road is 1 mille 800 passus."

V. THE PORTA NOMENTANA is on the Via Nomentana, leading to the Porta Collina, in the same manner as the Porta Salaria was on the Via Salaria, leading to the same inner gate. The old gateway remains, though in rather a ruined state^g. The road was turned a little to the north in the sixteenth century, when the Porta Pia was built on the new part of the road.

"The road to this gate follows the line of the preceding to the Porta Collina, when it turns off to this gate, making 1 mille 770 passus."

VI. THE PORTA CHIUSA, or the closed gate, is so called because antiquaries cannot agree about the ancient name of it. The exterior of this gate is distinctly of the time of Honorius, but this is an external facing only; in the interior the gate-posts are built of the large oblong split stones of the style of the Kings, and it has on one side the remains of a cornice of the time of the Republic. This ancient gateway was evidently standing then, and in use at the time that the wall of the Prætorian Camp was built up against the north side of it, but Honorius fortified it afresh as we see it. The outside and the inside of the wall do not at all agree with each other, the outside being evidently built up against the inner part.

"There seem to be traces of an early road which passes up the valley between the Quirinal and Viminal Hill, and in front of the remains of the Lavacrum of Agrippina (possibly the *Vicus Longus*). The Via del Grillo and the modern Via di Magnanapoli probably connect this line of street with the Via Bonella and the Forum. To the south of the Thermæ of Diocletian the street is named Via Strozzi. It passed no doubt through the Porta Viminalis to the closed gate south of the Prætorian Camp. The total length giving . . . 1 mille 850 passus."

VII. THE PORTA TIBURTINA, that is, the gate on the road to Tibur or Tivoli, through the outer wall, has an earlier gate of the time of Augustus preserved in the middle of it, as is proved by the inscription upon it relating to the aqueducts, which are carried over it. The older archway is buried up to the springing of the arch, or probably about ten feet, by the filling up of the foss-way in which it was made. On each side of it, that is, outside and inside of it, is a gateway-arch of Honorius^h standing at its original elevation, the level of the road not having been altered since his time. But in

^g One of the towers of this gate was destroyed in 1867 by the builders of the new wall of the architect Poletti, under the name of Pius IX., in connection with the new gate of Porta Pia.

^h Since this was written, the inner

arch of Honorius has been destroyed by the Pontifical Government, in 1870; but one jamb of it, being built into a modern house, is preserved, and this shews the level.

the time of Pliny the old foss-way followed the lower level, and the old gate or arch of Augustus alone, was standing across it.

“There seems to be a road passing due eastward from the Forum, and winding towards the Porta Esquilina. It obtains several names in the course of its route. After passing the gate it probably turned southward towards the church of S. Bibiana. Its exact course seems at this point somewhat doubtful. Possibly it passed to the Porta Tiburtina along the line of the aqueduct, some remains of which exist on the left of the Via S. Bibiana. Its length may be reckoned about 1 mille 630 passus.”

VIII. THE PORTA MAGGIORE, which includes the two gates—the Porta Prænestina and Labicana, has inscriptions upon it of the time of Claudius, and is evidently a part of the arcade of his aqueductⁱ; it therefore must have existed in the time of Pliny.

“The road to this gate must have passed the Colosseum, and along the street now called Via Labicana. The distance is 1 mille 980 passus.”

IX. THE PORTA ASINARIA is a few yards to the west of the modern Porta S. Giovanni. The exterior of the present structure is of the second or third century, but there was no doubt a gate there in the time of Pliny. The arch or gateway is filled up nearly to the top, but this arises from the raising of the ground on the inside, where it is twenty feet higher than on the outside, the gateway having been built on the level of the old road or foss-way. The interior in this upper part has been rebuilt by Theodoric, the exterior has been much repaired, and the arch filled up with a rough wall.

“After leaving the Colosseum, the road probably passed beneath the Coelian Hill along the lower part of the Via de’ SS. Quattro Coronati, and then along the Via di S. Giovanni Laterano. But in all probability the modern streets here do not follow exactly the ancient line, having been thrown out by the alterations of the Lateran in the sixteenth and seventeenth centuries. Its distance is approximately 1 mille 630 passus.”

X. PORTA LATERANENSIS.—The Lateran Gate still exists, though walled up and the lower part hid by earth piled up against it on the outside, which is planted as a vineyard. The eastern side of the Lateran Palace projects very considerably beyond it, and is of different construction, the original parts being excellent *lateritian* brickwork of the first century. Within the wall the Palace may be traced as far as the modern *fratra* or monastery (one side of which is built upon part of the old work), and nearly as far as the Baptistery. The south wall and towers of the Palace form part of the fortifications for a considerable extent; but the wall has been much mutilated and badly repaired.

ⁱ See the Chapter on the Aqueducts, and Regio V.

“This road, like the last, passed the Colosseum, but probably went round the fortress in which the Santi Quattro was afterwards built, and passed between the east end of the Coelian and the Lateran^k, and so down the southern slope of the hill to the gate, giving a distance of 1 mille 500 passus.”

XI. THE PORTA METRONIA, METRONIS, or MITRONII is one of the old gates at the point where the Aqua Crabra or Marana passes through the outer wall. This must have been in use in the first century, as the road leads up from it to the Arch of Dolabella of that period, although no work of a distinctive early character remains.

“The road to the Porta Metronia probably passed the Colosseum also, and then along the Via della Navicella across the Piazza della Navicella, and so directly to the gate. This gives a distance of 1 mille 360 passus.”

XII. THE PORTA LATINA, or gate at the passage of the Via Latina through the outer wall has been rebuilt, but must have been originally at least as early as the time of Augustus, when this addition to the city was made his first Regio.

“The road to this gate turns off to the right through the Arch of Constantine, and passing along the foss-way beneath the Palatine Hill (now Via di S. Gregorio) turns to the left past the site of the ancient *Porta Capena*, and then along the Via Appia till it branches off along the Via Latina. The distance of this course amounts to 1 mille 920 passus.”

XIII. THE PORTA APPIA must have been made at the same time. We find the Via Appia mentioned by authors of this period, and it is bordered by tombs of a still earlier date.

“The course followed was the same as in the previous route, except that it continues along the Via Appia till it reaches the gate. This gives in length 2 millia 40 passus.”

XIV. THE PORTA ARDEATINA, on the Via Ardeatina, where it passes through the boundary wall, is still standing, though long closed; it is of the time of Nero or Tiberius, as fine brickwork of the first century as any in Rome. This also must therefore have been in existence and in use in the time of Pliny. We do not find this gate mentioned by any ancient author, but there stands a gateway of the first century, incorporated in the wall of Aurelian, although not in a line with it, but in an angle made on purpose to include the gate, and the road is a very ancient one.

“The course followed was also probably through the Arch of Constantine^l, but

^k The pavement of an old road is known to exist in that valley or foss, although buried. It is nearly under the tomb of the first century on the bank.

^l The course may have been reckoned

along the western side of the Palatine, namely, the Via di S. Teodoro, Via de' Fenili, and the Via di Cerchi. It makes, however, very little, if any, difference in the measurement.

on reaching the southern end the road passed up into the Intermontium of the Aventine, and then between the two forts now occupied by the churches respectively of S. Balbina and S. Sabba, till it passed through the old gate *Porta Raudusculana*, and then passing along the outside of the line of the Caracallan aqueduct it reached the *Porta Ardeatina*, making a distance of . 2 millia passus."

XV. *PORTA OSTIENSIS* (S. Paolo).—The *Porta Ostiensis* must have been in existence in the time of Pliny; the bank through which the *Via Ostiensis* passes, and in which this gate was originally made, is the enclosure of the Aventine made by Claudius. But the gatehouse has been rebuilt in the fifth century, with the exception of the inner wall, and the two gates in it, which are of older date, and belonged to the two roads, one from the *Salaria*, the other from the *Palatine*.

"This course, without doubt, followed the north-western side of the *Palatine*, i.e. along the modern *Via di S. Teodoro* and *Via de' Fenili*, crossing over the *Aventine* past the church of S. Prisca and through the ancient *Porta Nævica*. The road was then direct to the *Porta Ostiensis*. The distance is 1 mille 350 passus."

XVI. *PORTA PORTUENSIS*.—This gate was near the bank of the *Tiber* on the southern side of the *Trastevere*, and the road to *Porto* passed through it; it was one of the gates *rebuilt* by *Honorius*, and the inscription of his time upon it has been preserved.

"There is little doubt one road, and that perhaps the most ancient into the *Trastevere*, was across the *Pons Sublicius*. The course from the *Forum Romanum* probably followed the *Via di S. Teodoro*, the *Via di S. Giorgio* in *Velabro*, and the *Via della Salara*; and then passing through the *Porta Trigemina* it crossed the bridge, and taking the present road following the bank of the *Tiber*, reached in a tolerably direct line the *ancient Porta Portuensis* (which is some 300 passus beyond the *modern Porta Portuensis*), making a distance of .
1 mille 700 passus."

XVII. *PORTA JANICULENSIS*, now called S. Pancrazio, is nearly on the highest point of the *Janiculum*, and was the gate from the ancient fortress to the adjoining table-land, on the promontory of which this fortress was placed. A gate in this position must have existed from the date when the fortress was made in the time of the *Kings*, but it had been probably more than once rebuilt, before it was finally destroyed by the *Goths*. The present gate is modern, and not exactly on the old site, as the present fortification is also modern, and encloses the old one. The fortifications of the *Trastevere*, as they now stand, are entirely the work of the *Popes*, and chiefly of the seventeenth century, but within the line are considerable ruins of the old walls of the *Janiculum* fortress, and the walls connecting it with the city.

“A road probably at this time passed over the Palatine Bridge, now the Ponte Rotto. The Via della Longaretta probably follows mainly the course of an ancient *via*. The hilly neighbourhood of the Janiculum prevented the road from reaching the gate in a direct line, and it is somewhat doubtful as to the course taken. Its total length, however, cannot be reckoned less than
1 mille 700 passus.”

XVIII. PORTA SEPTIMIANA.—This gate is on the northern part of the wall of the Trastevere, near the Tiber, and the Via della Longara passes through it. The gate seems to have been *rebuilt* by Septimius Severus, as it was named after him. The name of the gate before his time is not recorded.

“There is much doubt in tracing the course of this road. The shortest course would be perhaps along the same line as the preceding one, and crossing the river by the Ponte Rotto. There was a road across the island, and the road would be either through the Porta Carmentalis or the Porta Flumentana. On the other side of the river also, the course of the older roads has been much disturbed. The distance measured along an average line is 1 mille 360 passus.”

It will be seen that the distance to the eighteen gates from the Forum Romanum, when added together, make the following total. Also that the roads to these eighteen gates pass through twelve other gates, which we may reasonably suppose were in existence in Pliny’s time; but the courses to these twelve gates were not, he tells us, to be counted above and beyond the courses to the outer gate, or in other words, the distance between them and the Forum was not to be reckoned *twice over* (“*ita ut duodecim semel enumerentur*”):—

	Passing through	Distance in “passus.”
I. PORTA AURELIA.	1. Porta Carmentalis	1 600
II. — FLAMINIA.	2. — Ratumena	1 750
III. — PINCIANA.	3. — Fontinalis (?)	1 500
IV. — SALARIA.	4. — Collina	1 800
V. — NOMENTANA.	“ ”	1 770
VI. — (Chiusa).	5. — Viminalis	1 850
VII. — TIBURTINA.	6. — Esquilina	1 630
VIII. — PRÆNESTINA.	7. — Querquetulana	1 980
IX. — ASINARIA.	8. — Coelimontana (?)	1 630
X. — LATERANENSIS.		1 500
XI. — METRONIA.		1 360
XII. — LATINA.	9. — Capena	1 920
XIII. — APPIA.	“ ”	2 040
XIV. — ARDEATINA.	10. — Raudusculana	2 000
XV. — OSTIENSIS.	11. — Nævia	1 350
XVI. — PORTUENSIS.	12. — Trigemina	1 400
XVII. — JANICULENSIS.		1 700
XVIII. — SEPTIMIANA.		1 360
	Total	30 140

As confessedly in some cases the distance could only be measured approximately, the correspondence between the above total 30,140 and 30,760 of Pliny, is sufficiently close to warrant the position that Pliny's numbers agree with this topographical arrangement^m.

The twelve gates being counted only once, also further confirms this view. To make the number thirty-seven there were still seven gates *which had ceased to be*. The names of these must be mere conjecture. Possibly the two of the Capitol, and the three of the Palatine, which have been spoken of in previous sections, may count as five; and for the remaining two there were the Porta Sangualis and Porta Salutaris on the Quirinal, as the roads to the gates seem, according to the probable lines, to have gone *through* none of these, but passed by them, so that these were not to be counted; or if it is improbable that many of these were standing up to Pliny's time, there are others, some of which it is true are more or less doubtful, but sufficient at least to give the number of seven. A list has been given in the previous section of those gates which were probably in the *enceinte* of Servius Tullius.

It remains to note the calculation that "if all the different lines of streets were computed in the same manner, the result would be seventy miles or more."

This has no reference to the gates, but yet the mention of the Prætorian might seem to imply that Pliny, in his second computation, referred to a more extended boundary line than in the previous case, and that the first therefore comprised only the boundary of Servius Tullius. It is, however, probable that the space between the *agger* of Servius Tullius and the outer wall was much built upon, and he therefore referred especially to it, implying perhaps a contrast between the Rome which was bounded by the *agger* and the Rome of his time. Besides, it is very possible that a computation of the length of the streets had been made for the "City proper," and not for the suburb, and he therefore distinguishes between the two. These remarks appear to be necessary, as it has been taken for granted that the mention of the line of the Prætorian Camp in the

^m It may be asked what cause can be assigned for so singular a method of measurement. It is not easy to answer this, though practically it is not without its value. The gates are fairly distant apart from each other, and the roads to them are tolerably direct, so that the lines to them from a central point such as the Forum are, as it were, so many radii. By taking the average of the

eighteen we get a very near approximation to the area, as we obtain by this means a circle, of which the diameter is 3 millia 418 paces (or 3 miles 818 yards English measure), and consequently its circumference 10 millia 737 passus. The length of the irregular line of boundary he had already given, but the data for obtaining the average diameter was necessary in order to compute the area.

second case, implies that in the first case another line was referred to. It is needless to add that to test the computation with the doubtful traces of the older streets is simply impossible.

Enough evidence, however, has been probably adduced, to shew that the outer fortification (*mænia*) of Rome at this time, whatever its nature, was that which was followed by Aurelian when he built the wall which bears his name.

It is quite possible, even probable, that the *mænia* (and this is the expression used by Pliny) were composed as much of earth as of stone ; still they afforded good foundations. They had served their day, when the low mound, with a wall on the outside to render it difficult to mount to the top, was sufficient to meet the mode of attack usually adopted, and they were useful also to resist the first attack when the Romans had the inner line in good repair to fall back upon ; but when the arts of war had advanced, and the city had increased, so that much valuable property lay beyond the circuit of the inner line, it was necessary to build a high wall along the line occupied by these outer *mænia*, which was commenced, as we shall see in the next section, under Aurelian.

SECTION III.

HISTORICAL NOTICES OF SUCCESSIVE REPAIRS OF THE WALLS.

THE disturbances which had taken place in the time of Gallienus (A.D. 265), had given so much encouragement to the barbarians, that serious fears were entertained of a combined attack upon Rome. Upon the accession of Aurelian, A.D. 270, one of the first acts of the new Emperor, or of the Roman Government acting in his name and the Senate, was to begin to strengthen the fortifications of the city.

The chief authorities for attributing the wall in question to Aurelian are Vopiscus, writing A.D. 293, and Zosimus, writing A.D. 412. The former says :—

“On this, when he (Aurelian) saw it might come to pass that what had occurred under Gallienus ⁿ might happen again, having obtained the concurrence of the senate, he enlarged the *walls* of the city of Rome ^o.”

Elsewhere Vopiscus mentions that :—

“He so enlarged the walls of the city of Rome that its circumference contained nearly fifty thousand [feet ^p ?].”

Zosimus also says :—

“The Emperor understanding that the incursions of the Alamanni into the neighbouring states were on the decrease, being more anxious about Rome and the neighbourhood, returned into Italy. . . . Thus also Rome was surrounded by walls which it had not before, and the wall begun by Aurelian was finished by Probus ^q.”

Aurelius Victor, writing A.D. 358, follows Vopiscus :—

“And lest at any time those things which happened under Gallienus should occur again, he surrounded the city with walls, as strong as possible, and with a wider circuit ^r.”

^s Gallienus became associated in the imperial rule A.D. 254, and on his death at Milan, Claudius (Gothicus) was proclaimed Emperor, A.D. 268. Aurelian seems to have become Emperor A.D. 269, and was slain by treachery, March, A.D. 275. It was after having granted peace to the Vandals, in A.D. 271, that he returned to Rome and began to rebuild the walls.

^o “Hic actis quum videret posse fieri, ut aliquid tale iterum quale sub Gallieno evenerat proveniret, adhibito

consilio Senatus muros urbis Romæ dilatavit.” (Vopiscus in Aureliano, c. xxi.)

^p “. . . muros urbis Romæ sic ampliavit ut quinquaginta prope millia murorum [pedum?] ejus ambitus teneant.” (Ibid., cap. xxxix.)

^q Zosimi Hist., lib. i. cap. xlix. edit. Amm. Bekker, p. 43.

^r “. . . ac ne unquam, quæ per Gallienum evenerat, acciderent, muris Urbem quam validissimis laxiore ambitu circumsepsit.” (Sext. Aurel. Victor. de Cæsaribus, c. xxxv.)

Eutropius, writing A.D. 361, mentions the walls as follows :—

“He (Aurelian) surrounded the city with stronger walls^s.”

Cassiodorus also, writing A.D. 562, in his Chronicle, uses the expression :—

“He surrounds Rome with stronger walls^t.”

In the foregoing passages it is to be remarked, that while all agree as to the fact that Aurelian built walls round the city, Zosimus implies that there were no walls before, while Vopiscus implies that he enlarged the circuit of the *existing* walls, and he gives the length of the circuit to which the walls were extended. It would seem at first sight that it was impossible to reconcile these statements with those of other writers, as interpreted by the existing remains. The probability is that the explanation is to be found in the special use made of the word *muri*, i.e. ‘walls, properly so called^u.’ It will be noticed that this word is used by all the later writers, while before we have had the word *mœnia*, which signifies rather high embankments, chiefly of earth, often supported, it is true, by a wall, but not having the same advantages for resisting an attack as the later mode of fortification.

A change appears to have taken place at this time in the mode of attacking fortified places, and higher walls were necessary for the defence. In the history of the siege of Rome by the Goths not long afterwards, that is, in the fifth century, written by Procopius (an eye witness), we read frequently of Balistæ, and Aries and Turres, and other machines of war, exactly similar to those continued in the Middle Ages. These are not mentioned *as anything new*, but as the ordinary machines of war for a siege, and had therefore probably been in use for a century or so before. The besieging towers were high and of wood, covered with hides to prevent their being set on fire, and were intended to be moved on wheels up to the walls which they could overtop.

The walls and towers, therefore, of the time of Aurelian were very much higher than they had been before, and they had probably wooden *hourds* at the top for the use and protection of the defenders, of which we have several traces in the corbels, and put-log holes, which are still visible in many parts of the walls, especially

^s “Urbem Romam muris firmioribus cinxit,” &c. (Eutropii Hist. Rom. Breviar., lib. ix. c. 15.)

^t “Romam firmioribus muris vallat.” (Cassiodori Chronicon, Aurelianus xxix.)

^u Varro says distinctly that the bank

of earth thrown out of a trench on the inner side was called *murus*, but in the course of time the word had changed its signification, and *murus* came to signify a lofty wall of stone or brick only, as distinct from low earthworks.

round the towers, and on part of the wall of the *Castra Prætoria*. The fortification of this period was a truly magnificent work ; the wall being nearly fifty feet high, with a corridor or passage for the sentinels made within the wall, about fifteen feet high and two wide, connecting the numerous towers and battlements, very different to the *mœnia* which stood there before ; and Aurelian has, probably with justice, the credit of it. There were lofty walls in part of the outer line of the fortification of Rome, as we know, before his time, for instance, the great aqueducts formed part of this line as they do now, and it is to these that Vopiscus probably refers when he speaks of enlarging the walls : unless indeed he alludes to the Walls of the Kings, which were no doubt still in existence round the hills, and afforded very strong protection against the enemy.

The outer *mœnia* before the time of Aurelian were very possibly similar in many respects to what we find now existing of the *agger*, as it is termed, of Servius Tullius ; which, it must be remembered, was supported by a wall and not wholly of earth. Aurelian made use of the foundation and, when he could, of the supporting wall, and also of the gates, because not only by analogy is it probable that such *mœnia* had gates, when we have distinct record of three in the *agger* of Servius Tullius, but we have, as already repeated more than once, traces of the earlier gates in the same line of wall, the origin of which is, upon the authority of the above passages, wholly given to Aurelian, although deviations are made in this line of his wall to include the older gates.

One more point has still to be noticed. The measurement of Vopiscus is generally considered to be erroneous, or else that the walls of Rome must have been much greater in extent than the Aurelian Wall. It is to be remarked, however, that the number only is given, not the denomination. In most of the early writers, no doubt, the “*passus*,” or measure of five Roman feet, was understood when not expressed ; but the Roman foot, we believe, came generally into use in later times. The *Regiones*, for example, are measured in the *Notitia* and the *Curiosum Urbis* by feet and not by *passus*, and these records are probably of a date not more than a century later than the time of Vopiscus, if so much. If the number fifty thousand is taken to mean feet, as will be seen, the measurement agrees with that computed from Nolli’s large Map^x.

^x From the point where the wall of Aurelian leaves the river (on the eastern bank) to where it touches it again, the total circuit (including the Prætorian camp) is 40,300 feet.
The same on the western bank (Trans-tiberine) 7,000 feet.
The eastern bank of the Tiber be-

The work was begun A.D. 271, and was finished, as Zosimus tells us, under Probus, who was slain in A.D. 280. Ten years is but a short period for such an enormous work, and the gates were probably but slightly fortified; this was perceived by Honorius about a century afterwards, A.D. 395—425, who added gatehouses or gateway-fortresses to all the principal gates, not destroying the old gates, but strengthening them with additional defences. This is clearly shewn in the case of the Porta Maggiore and the Porta S. Lorenzo, as will be described.

All the precautions of Honorius were not sufficient to save the city, which was taken by the Goths in A.D. 409 by a surprise; they entered by the Porta Salaria, the weakest point, and again burnt the house of Sallust, which had been restored in the time of the early Emperors after it had then been burnt. They burnt many other buildings and sacked the city, as we read in Procopius.

“Alaric, having armed all his forces, kept them close to the Salarian gate in readiness for an assault; for it was there that he had pitched his camp at the beginning. Then all the young men assembling at this gate at the appointed hour made a sudden attack on the guards, and put them to the sword. This done, they threw open the gates at their leisure, and admitted Alaric and his army within the city. These set fire to the houses which were nearest to the gate, among which was that of Sallust, the same who wrote long ago the history of the Romans. Of this the greater part remained half-consumed even to my time. Having plundered the whole city and *spoiled most of the Romans*^y, they continued their advance^z.”

The poet Claudian^a, in his panegyric of the consulate of Honorius, mentions his having added *hills* to the city, but we do not find any mention of this in the historians. If it is not to be attributed wholly to poetical licence, it is probable that in making preparations

tween the southern point and the Emporium 3,000 feet, giving a total of exactly 50,300 feet.

In the other mode of reckoning, namely, where the measure is considered as meaning *passus*, and the reading “fifty” an error for “fifteen” (*quinq.* for *quind.*), there is the objection, not only of the necessity of adopting an important various reading without any authority, but of the fact that unless the Vatican be included, the circuit is not fifteen miles, but as seen above, only . . . 10 millia 60 passus.

^y Procopius does not mean to say that they slaughtered most of the inhabitants, which is one of the meanings of the Greek word used. Here the sense must be to spoil or deprive of their property.

^z Procop. de Bello Vandalico, lib. i. c. 2.

^a “Sic oculis placitura tuis insignior auctis

Collibus, et nota major se Roma videntam

Obtulit. Addebant pulchrum nova mœnia vultum,

Audito perfecta recens rumore Getarum. Profecitque opifex decori timor; et,

vice mira,
Quam pax intulerat, bello discussa senectus.

Erexit subitas turres, cinctosque coegit Septem continuo montes juvenescere muro.”

(Cl. Claudiani XXVIII. de VI. Consulatu Honorii, v. 529—536.)

against attacks he fortified the Vatican. There is a singular incident mentioned^b in the account of the taking of the city, namely, that all those who took refuge in the church of S. Peter and S. Paul (on the Vatican Hill), were by the command of Alaric unmolested. It would appear, however, that this fortified hill was still considered as outside the city, and probably only connected with it by a covered way.

The city, we learn, was again sacked and burnt by the Vandals under King Genseric in A.D. 455. There is no record of any damage to the walls at that period, but it is probable that they were more or less injured, as we have an account of their restoration, in the year 500, by King Theodoric, in the Chronicle of Cassiodorus^c, at which time he built "very strong fortresses."

In 537 they were again seriously damaged in the siege of the Goths, when the city was defended by Belisarius, of which we have the minute account by Procopius, who is practically the most important authority for the history of Roman affairs during the fifth and sixth centuries. We are told later by the same writer that Totila, A.D. 541—552, proposed to raze the walls of Rome to the ground, and that he so far carried out his intention as to destroy as much of them as amounted in the whole to about a third part of the circuit.

"Becoming aware of these things, Totila resolved to raze Rome to the ground, and to leave there the greater part of his army, and with the remainder to proceed against John and the Lucanians. So, of the circuit of the walls, he threw down as much in different places as would amount to about a third part of the whole^d."

These were hastily repaired by Belisarius (c. A.D. 560), and in places the bad construction of that period may still be seen.

... "As soon as Totila heard this, he broke up his camp with all his army, and reached Belisarius and the city before the former had been able to fit the gates in the walls. For Totila had destroyed all of them, and Belisarius from want of workmen was not able to get the start in constructing them^e."

^b Mentioned by Paulus Diaconus, and quoted as an extract from Procopius by J. Bap. Egnatius (*Romæ Captivitas*), but Procopius mentions the incident as occurring in a later reign.

^c "Hoc anno D. N. rex Theodoricus Roman cunctorum vocibus expetitus venit, et senatum suum mira affabilitate tractans, Romanæ plebi donavit annonas, atque admirandis mœnibus deputata per annos singulos maxima pecuniæ quantitate subvenit. Sub cujus felici imperio plurimæ renovantur urbes, munitissima castella conduntur, consurgunt

admiranda palatia, magnisque ejus operibus antiqua miracula superantur." (Cassiodori Chronic. Anast. xlviii. Patricius et Hypatius Coss.)

"... et ad restaurationem palatii, seu ad recuperationem mœniæ civitatis singulis annis libras ducentas de arca vinaria (Theodoricus) dari præcepit." (Excerpta de Odoacre, Theoderico, &c., ap. Murat. Rer. Ital. Script., t. xxiv. col. 640 (v.), D.)

^d Procopius de Bello Gothico, lib. iii. c. 22.

^e Ibid., lib. iii. c. 24.

... “And the Isaurians alone, who acted as traitors, remaining at their post, opened the gates without opposition, and received the enemy into the city^f.”

The repairs of Belisarius are rude, perhaps the place where they can be most readily distinguished is in that part of the wall which adjoins the Lateran Palace. In other parts the stones which happened to be near, were piled up without mortar against the foot of the towers that were partially destroyed; we read:—

“But as he [Belisarius] was not able to rebuild in a short time as much of the walls as Totila had destroyed, he adopted this plan: collecting all the stones which happened to be near, he laid them on one another without order, and with nothing between, since he had neither mortar at hand, nor anything else of the kind; but in order that the mere appearance of a building might be preserved, he placed on the outside a great abundance of stakes. He happened also before to have dug deep ditches round the whole circuit of the walls, as has been mentioned by me in the former part of my history, and as the whole army worked with zeal during five-and-twenty days, all the wall that had been destroyed was in this way completed^g.”

In the opinion of some, the large heavy stones of the period of the Kings or of the Republic, which he had collected and piled up, were those remaining in their places in some instances, and serving as buttresses to the towers until they were needlessly removed by the Pontifical architect in 1870, under the pretext of *restoring* the walls.

The walls were again much damaged in the siege by the Lombards in the beginning of the eighth century, and repaired by the citizens under various bishops, who had then acquired the name of Popes. Anastasius has frequent mention of these repairs from the pontifical records among the great deeds of the Popes. It was the custom for each pontiff to write the life of his predecessor, and these contemporary records were published with additions by Anastasius, the pontifical librarian, in the ninth century: his own additions and interpolations are of doubtful authority, but for such facts as these his history may fully be relied on. The later Popes invariably put up inscriptions, with their names, on every piece of the wall that they repaired; but for the larger and more important repairs before the eleventh century we have to trust to history and to the construction, which is different in each succeeding century. Sisinius, a Syrian bishop, who was Pope only a few months in 708, but had resided as cardinal before, “had constantly on his mind the care of the dwellings of the citizens, and ordered lime to be burnt for the repair of the walls^h.”

^f Procopius de Bello Gothico, lib. iii. c. 20.

^h Anastasius Biblioth. in vita Sisinnii, No. 169.

^g Ibid., lib. iii. c. 24.

Gregory II., A.D. 715—731, also “ordered lime to be burnt, and the unfinished part of the wall to be repaired [with concrete] from the gate of S. Lorenzo [towards the north]; this part had been weakened in various tumults, and hastily repaired in emergenciesⁱ.” This is confirmed by Frodoardus, a contemporary writer, who says “he set about repairing the wall of the city with *lime*^k.”

The work was continued in the time of his successor, Gregory III., A.D. 731—741, as we also find from Anastasius.

In the time of Hadrian I., A.D. 772—795, another great effort was made, and the work was carried on vigorously. He was one of the great family of Colonna, and a very active Pope; we have more buildings of his time in Rome than almost any other after the early Emperors, and we have a full account of his work upon the walls of the city, which are described as

“in a very bad state, many parts in ruins, and towers thrown down. He collected a large number of the inhabitants of the Tuscan cities, as well as of the Campagna and of Rome itself, and the suburbs, and devoted the whole of the ecclesiastical revenues to this object for some years, and thus restored and decorated the whole circuit of the city^l.”

In the ninth century the minute description of the walls given by the anonymous writer, which is usually called the *Chronicle or Itinerary* of Einsiedlin^m, gives us useful information as to what was existing at this time. He had evidently walked round the whole wall, including the Trastevere, and counted every tower and even every battlement which he enumerates. These details shew how thoroughly the wall had been repaired at that time, and although now much altered and the original battlements gone, many of the towers and gates remain, and agree with his description. He concludes his enumeration by saying, that in his time

“There were in the whole 383 towers, 7,020 merlons, 6 posterns, 106 corbels, 2,066 large windowsⁿ.”

ⁱ Anastasius in Gregorio II., 177.

^k “*Mœnia qui aggrediens Urbis reparare, coquendis Calcibus insistit, trabibusque labore petitis [e Calabria].*” (Frodoardi Fragmenta de Rom. Pontif. apud Murator. *Rer. Ital. Script.*, tom. iii. pars 2, col. 67, C.)

^l Anastasius *Biblioth. in Hadriano I.*, No. 326. This is confirmed by a contemporary author, Riccobaldus di Ferrara, printed in Muratori “*Rerum Italicarum Scriptores*,” vol. ix. col. 232, who adds that he also gave bronze doors to S. Peter’s Church.

^m This is printed in Mabillon’s “*Vetera Analecta*,” folio ed., p. 357—364, under the title of “*Antiqua collectio veterum inscriptionum Romanarum*.”

ⁿ For the text of this work see Mabillon’s “*Vetera Analecta*,” p. 363. The “*Antiqua Collectio*,” &c., and the *Chronicle of Einsiedlen*, in Switzerland (canton of Schwytz), are two different works altogether. G. H. Pertz has published the latter in “*Monumenta Germaniæ historica*,” *Script.*, t. iii. p. 137—149.

In A.D. 848—852, the walls of the Leonine city were built by Leo IV., to protect the Vatican against the threatened invasion of the Saracens; these were connected with the fortress of S. Angelo, into which the Mausoleum of Hadrian had been converted, and became part of the circuit of the walls, as described by the Chronicler, shortly afterwards, but were not united with the Janiculum fortress, or the wall of the Trastevere of the time of Aurelian, until the seventeenth century, when the whole city on that side of the river was enclosed in a new wall built according to the modern system of fortification.

Leo IV. is also stated to have continued the restoration of the old wall of the Emperors with great activity; he is said

“to have visited the works continually in person, both on horseback and on foot, and to have allowed no delay in them; to have rebuilt fifteen of the towers from the ground, and to have repaired the gatehouses, and fortified them with new wooden doors strong enough to resist an enemy.”

Anastasius, who was living at the time, warmly praises the building of this Pope, which he calls “a great and marvellous work, done with much wisdom, subtilty, prudence and honesty.” The work was carried on during four years, from A.D. 848 to 852. The new city was then consecrated with

“a grand ceremonial; a penitentiary procession was organized, in which all the bishops and priests of the city joined with the orders of clergy of the Roman Church, all with bare feet, and their heads sprinkled with ashes, making the circuit of the walls chanting litanies, psalms, hymns, and canticles, while the Cardinal bishops blessed the wall with holy water. The Pontiff stopped at each of the three gates of the new city, and recited a separate prayer at each.”

These prayers are given in full by Anastasius^p, who adds:—

“He then freely distributed alms to all who had assisted at the ceremony, whether natives or strangers.”

The three gates of the Leonine city are believed to have remained until after the return of the Popes from Avignon, when the Vatican being made their usual habitation, the court and many strangers collected round them, new streets were made in the Leonine city, and new gates for the convenience of its inhabitants.

In A.D. 1063 the Leonine city was taken by surprise at night by the anti-pope Honorius II., or Cadolus of Parma, who was received into the fortress of S. Angelo by Cencius, son of the prefect of the city, who was in charge of it. In A.D. 1067 the Leonine city was

^o Anastasius Bibl. in vita, Leo IV., No. 534.

^p The whole story is too long to ex-

tract, but is worth reading as a minute account of a consecration in the ninth century.

again attacked and taken by Frederic I., and the Pope, Alexander II., was obliged to take refuge in the castle of the Frangipani on the Palatine, of which the chapel, now the small church of S. Silvestro in Palatio, is the only remnant.

In A.D. 1084 the Emperor Henry IV. besieged the Pope Hildebrand, or Gregory VII., in the fortress of S. Angelo. Robert Guiscard and his Norman army came to the assistance of the Pope, and the Leonine city was dismantled¹.

“Robert Guiscard entered the city by the Porta Flaminia, and being opposed by the Romans, burnt all that part of the city which is near the churches of S. Lorenzo in Lucina and S. Silvestro in Capite. He afterwards went to the castle of S. Angelo and released the Pope, taking him to the Lateran Palace, and being again opposed burnt all those parts of the city that are round the Lateran and the Coliseum¹.”

In the eleventh century there is a short description of the extent of Rome preserved to us by William of Malmesbury, in the chapter which gives an account of the pilgrimage to Jerusalem; omitting the names of the churches and catacombs, the list stands as follows, and in its main details it agrees with the list as given by the chronicler of Einsiedlin:—

“But that nothing may be wanting to its honour, I will add also the number of the gates, and the multitude of its sacred relies; and that no one shall pretend that he is prevented from understanding the things by the hard words, the account shall be in an every-day and easy style.

“The first is the Porta Cornelia, which is now called the Gate of S. Peter, and the Cornelian Way. Near it is situated the church of S. Peter, in which his body lies.”

“The second is the Porta Flaminia, which is now called the gate of S. Valentine, and the Flaminian Way, and when it reaches the Milvian Bridge, it takes the name of the Ravennanian Way, because it leads to Ravenna; and there, at the first stone without the gate, S. Valentine rests in his church.”

“The third is called the Porta Porciniana (Pinciana), and the way after the same name; but where it joins the Salarian, it loses its name, and there, nearly in the spot which is called Cucumeris, lie the martyrs, Festus, Johannes, &c.”

“The fourth is the Porta Salaria and Salarian Way, now called S. Silvester’s.”

“The fifth is the Porta Numentana.”

“The sixth is the Porta Tiburtina and Tiburtine Way, which is now called S. Laurence’s: near this Way lies S. Lawrence in his church.”

¹ “Quod audiens, Imperator secedit ab Urbe cum suo Antipapa et suis sequacibus, cognoscens se odiosum Romanis, destructa tamen prius parte Capitoli, et *Civitate Leonina*. Robertus autem eadem die veniens ad Urbem, ipsam capit, et militia Comitissæ Matildæ cum ipso; ac ferro et igne consumit. Gregorium vero suo loco restituit, seu sedi cum toto Collegio Cardina-

lium.” (Ptolemæi Lucensis Ecclesiasticæ Historiæ Novæ, lib. xix. cap. 6, apud Muratori, *Rerum Ital. Script.*, t. xi. col. 1074 E.)

² Pandulphi Pisani Vita Gregorii VII. apud Muratori, *Rerum Italicarum Scriptores*, vol. iii. p. 313, col. 2, A, B; et Ptolemæi Lucensis Eccles. Hist. ap. Muratori, vol. xi. col. 1074.

“The seventh is called, at present, the Porta Major, formerly the Sircurana [Siracusan Prænestina] and the Lavicanian Way, which leads to S. Helena.”

“The eighth is the Porta S. Johannis, which by the ancients was called Assenarica (Asinaria).”

“The ninth gate is called Porta Metrosa (Metronia), and in front of both these run the Latin Way.”

“The tenth is called the Latin Gate and Way.”

“The eleventh is called the Appian Gate and Way. There lie S. Sebastian, and Quirinus.”

“The twelfth Gate and Way is called the Ostiensian, but, now, S. Paul’s, because he lies near it in his church.”

“The thirteenth is called the Portuarian Gate and Way.”

“The fourteenth is the Aurelian Gate and Way, which now is called Porta S. Pancratii, because he lies near it in his church^s.”

To the above extracts reference will be made in the succeeding section. The mode of spelling the names of some of the gates is evidently corrupt, but the context leaves no doubt as to their identification.

In A.D. 1157 some portion of the wall was restored by the Senate, as we see by the inscription recording it on the inside of the Porta Metronia.

In the thirteenth century we have another description of the walls in the tract of Martinus Polenus, *De Romanæ Urbis Exordio*, which

^s “Sed, ne quid honori desit, adjiciam et portarum numerum, et multitudinem sacrorum cinerum; et, ne quis obscuritate verborum se causetur a cognitione rerum rejici, erit sermo quotidianus et levis.

“Prima porta Cornelia, quæ modo dicitur Porta Sancti Petri, et Via Cornelia. Juxta eam ecclesia beati Petri sita est, in qua corpus ejus jacet, auro et lapidibus parata. . . .

“Secunda porta Flaminia, quæ modo appellatur Sancti Valentini, et Via Flaminia; et cum ad pontem Molbium pervenit, vocatur Via Ravennana, quia ad Ravennam ducit. Ibi in primo milliario foris sanctus Valentinus in sua ecclesia requiescit.

“Tertia porta Porciniana, et via eodem modo appellata; sed cum pervenit ad Salariam nomen perdit: et ibi prope, in eo loco qui dicitur Cucumeris, requiescunt martyres Festus Johannes,” &c.

“Quarta porta et Via Salaria, quæ modo Sancti Silvestri dicitur. . . .

“Quinta porta Numentana. . . .

“Sexta porta et Via Tiburtina, quæ modo dicitur Porta Sancti Laurentii.

Juxta hanc viam jacet sanctus Laurentius in sua ecclesia, et Abundius martyr. . . .

“Septima porta modo Major dicitur, olim Sircurana dicebatur, et Via Lavicana, quæ ad beatam Helenam tendit. . . .

“Octava porta Sancti Johannis, quæ apud antiquos Assenarica dicitur.

“Nona porta Metrosa dicitur, et coram istis ambabus Via jacet Latina.

“Decima porta et Via Latina dicitur. . . .

“Undecima porta et Via dicitur Appia. Ibi requiescunt sanctus Sebastianus et Quirinus. . . .

“Duodecima porta et Via Ostensa dicitur, modo Porta Sancti Pauli vocatur, quia juxta eam requiescit in sua ecclesia. . . .

“Tertiadecima porta et Via Portuensis dicitur. . . .

“Quartadecima porta et Via Aurea, quæ modo Porta Sancti Pancratii dicitur, quia juxta eam requiescit in ecclesia sua,” &c. (Willelmi Malmesbir. Gesta reg. Angl., lib. iv. c. 2, ed. Th. Duffus Hardy, vol. ii. pp. 539—544.)

is curious, being written entirely from the clerical point of view with reference to the churches.

“It has 360 towers, in circuit it is 22 miles, besides the Trastevere and the Leonine city, including which it is said to be 42 miles. . . . The principal gates are the Porta Capena, which is called S. Paul’s, near the sepulchre of Remus ; Porta Appia, which leads to [the chapel of] *Domine quo vadis* and the Catacombs ; Porta Latina, near which is the church of *S. Johannes in Oleo* ; Porta Asinaria Lateranensis ; Porta Metronii, where the stream enters the city ; Porta Lavicana, which is called Major, which is near S. Croce ; Porta Taurina or Tiburtina, which is called S. Lorenzo ; Porta Numentana, which leads to S. Agnes ; Porta Salaria, which leads towards S. Sabina ; Porta Pinciana, which is near the church of S. Felice on the Pincio ; Porta Flaminia, which is near the church of S. Maria del Popolo, and by which we go to the Milvian bridge ; Porta Collina, which is near the Temple of Hadrian, near the bridge of S. Peter. In the Trastevere are three gates, and in the [Leonine] city three^t.”

There are several ignorant errors in this description, shewing that the writer was not well acquainted with the localities, and these are so similar to those in the *Mirabilia Urbis Romæ* that there is little doubt they were both taken from the same source. Besides the exaggeration of the extent of the city, the Porta Capena is confused with the Porta Ostiensis or S. Paolo ; the pyramid of Cestius is called the sepulchre of Remus ; the Sabine towns to which the Porta Salaria leads are confused with S. Sabina ; the Porta Collina is transposed to the bank of the Tiber, opposite the Mausoleum of Hadrian, that is, from the eastern to the western side of the city^u. These errors prove the work to be of an ignorant age, and written originally by some one not conversant with the place, and two persons could hardly have fallen into the same errors. Still these medieval descriptions of the walls are curious and interesting.

The *Mirabilia* of the thirteenth century enumerates 361 towers, 44 castles, and 900 *propugnacula* or turrets. It also gives twelve gates and five posterns, exclusive of the Transtiberina. The gates are thus enumerated in the *Mirabilia* :—

1. Capena ; 2. Appia ; 3. Latina ; 4. Mitroni ; 5. Asinaria (Lateranensis) ; 6. Lavicana or Major ; 7. Taurina ; 8. Nomentana ; 9. Salaria ; 10. Pinciana ; 11. Flaminia ; 12. Cellina, or Cornelia ; and in the Transtiberina, Septimiana, Aurelia, and Portuensis.

Boniface IX., A.D. 1389—1404, and Martin V., 1417—1431, repaired the walls. Boniface also strengthened the fortifications of the castle of S. Angelo, and built the high tower on the Capitol.

^t lib. i. c. 4, 5, Basle, 1559, (apud Nibby, *Mura di Roma*, p. 280.)

^u Unless the name should be spelt Cellina, as it is in the *Mirabilia* ; if so, all other traces of this name have dis-

appeared along with the gate itself. Possibly it is the one called Aurelia by Procopius, and Cornelia in the extract from William of Malmesbury.

In the beginning of the fifteenth century Leonardus Aretinus^x mentions that the wall near the Janiculum had fallen down in several places; it is now a picturesque ruin by the side of the road up to a villa, this road is in the old foss, the earth on the other side of the wall being many feet above it.

In a document of this period we find the Porta del Popolo first mentioned^y :—

“In the year 1404. The King Ladislaus, after high mass, retired from the palace which was at the top of S. Peter’s steps (the Vatican), and went out through the *Porta Viridaria* (the garden-gate), and entered [Rome] over the *Ponte Molle*, and through the gate of *S. Maria del Popolo*, and also entered through the arch near the church of *S. Lorenzo in Lucina*, and went through the *Piazza della Colonna* (Antoniana), and made Galeot of Normandy a Knight in front of his own house. And the said King rode through the *Via di Torre de’ Conti* towards the church of the Lateran, where he abode for one night.”

In 1407 a part of the wall near the Monte Testaccio was destroyed by the vassals of the Savelli coming from Albano, and in the same year the Colonnas destroyed a part of the wall between the Porta Maggiore and the Porta S. Lorenzo^z. These and other parts of the wall were repaired by Ladislaus, King of Naples, in 1408, but the same king took down another part of the wall in 1413, near the monastery of S. Croce, to effect his own entrance, and stationed his forces in the Lateran^a.

In 1431, after the death of Martin V., (a Colonna,) Poggio Bracciolini, a Florentine, wrote his treatise *De Varietate Fortunæ*, in which he says that he had measured the walls of the city, and found them only ten miles without the Leonine city in the Trastevere.

^x “Adversus Janiculum mœnia erant nonnullis locis vetustate collapsa, hæc quoque loca armatis complebantur.” (Leonardi Aretini rer. suo temp. in Ital. Gest. Comment. ap. Murat. Rer. Ital. Script., t. xix. col. 923, D.)

^y “Anno 1404 . . . recessit dictus dominus rex Ladislaus de Palatio in capite scalarum Sancti Petri post missam majorem, et exivit per Portam Viridariam, et intravit per pontem Moli, ac etiam per Portam Sanctæ Mariæ *dello Popolo*, et intravit etiam per arcum juxta ecclesiam Sancti Laurentii in Lucina, et ivit per regionem Columnæ, et fecit Militem Galeottum de Normannis ante domum dicti Galeotti; et equitavit dictus dominus Rex per viam *Torre dello Conte* versus ecclesiam Lateranensem, et ibi fecit residentiam per unam noctem.” (Diarium Romanum, ap. Murator. Rer.

Ital. Script., vol. xxiv. col. 974, B.)

^z “A dì 6. di Giugno i Colonnese, co gli altri cacciati da Roma, ruppero il muro di Roma tra la porta di Santa Maria Maggiore, e la porta di San Lorenzo, ed entrarono in Roma.” (Cron. di Bologna, ap. Murat. Rer. Ital. Script., t. xviii. col. 593, B.)

“Inter alia mala per eum perpetrata fuit confessus, quod de Anno Domini 1407, de mense Februarii, fuit unus de principalibus ad frangendum murum in loco videlicet qui dicitur Testacia. Multum esset scribendum mala per eum perpetrata.” (Diarium Romanum ab anno MCCCCIV. usque ad MCCCCXVII. auct. Ant. Petri; ap. Murat. Rer. Ital. Script., t. xxiv. col. 988, C.)

^a Diario della città di Roma Scritto da Stefano Infessura, *ibid.*, vol. iii. part 2, col. 1120, B.

SECTION IV.

DESCRIPTION OF THE CIRCUIT OF THE WALLS.

IN the previous section a rapid survey has been taken of the events which had any influence on the destruction, repair, or alteration of the wall, from the time of Aurelian down to the fifteenth century. Incidental notices of historians and poets have been referred to, and though few in number, and seeming of little importance, they are on the whole not difficult of reconciliation with the existing remains.

To avoid repetition, and to make the account clear, it will be best to follow a topographical arrangement, and pass round the circuit of the wall, pointing out as far as possible the work of the different periods already briefly referred to.

In this the description of the anonymous writer of the Itinerary of Einsiedlin will be of service, as he describes exactly what he saw existing in his own time, namely, in the ninth century.

He begins his survey at the north-west corner, starting from the gate of S. Peter's in the direction of the Porta Flaminia [or del Popolo], and going round the whole circuit of the city returns to the same point again.

I. "From the gate of S. Peter's, with its gate (towers), to the Flaminian gate—16 towers, 782 merlons of the battlement, 3 postern gates, 4 pairs of corbels^b, 107 large external windows, 66 small windows, (or oillets?)."

It is probable that this gate of S. Peter, from which he commences his circuit, was at the city end of the fortress connected by two bridges with the Hadrianum, one the Pons Ælius^c, the other usually called by modern topographers the Pons Triumphalis. The remains of this bridge are visible some hundred yards westward of the Ponte S. Angelo, but all traces of the gate have disappeared. It probably stood between the two bridges, and had two roads branching from it. The Via Triumphalis, which went under the Porta Triumphalis in

^b The *necessaria* (which is the word used by the Chronicler) were constructions *corbelled* out from the wall. They were used primarily for getting rid of the refuse from the camp, but in case of the wall being attacked, they also served for throwing down missiles on the heads of the enemy beneath.

^c It is called *τῇ γεφύρᾳ τῇ Αἰλίας* (Pons Ælius) by Dion Cassius (Cassii Dionis Cocceiani Rerum Romanarum,

l. lxix. c. 23; ed. Imm. Bekker, t. ii. p. 332, Lipsiæ, 1849, 8vo.), who says, "His body was placed in the tomb which he had built on the bank of the Tiber, near the Ælian bridge, because the tomb of Augustus was full." The writer, however, of Hadrian's life, Spartianus, gives the honour of a bridge, as well as the tomb, to that Emperor. See note at the end of this Section.

the Porticus of Octavia, and passed the Theatres of Marcellus and Pompey, had here passed across the bridge. The road on the other side was probably the Via Aurelia Nova, which is referred to in inscriptions, and which was a branch from the main Aurelian way which entered the *enceinte* by the Porta Janiculensis, now Porta di S. Pancrazio.

In this part the wall has been too much destroyed for anything to be made out beyond the lower part of the towers on the bank of the river, which remain with houses built upon them. The parts that remain are of concrete of early character, probably of the time of Sylla, or at least, they could hardly be later than Augustus. They are little more than substructures, and it is therefore probable that they had not been rebuilt by Aurelian, as was the case with that part of the wall next the Tiber at the southern end of the city below the Emporium, where his work remains very distinctly, while here not a vestige is seen. Nor have we far to look for an explanation. Between the time of Augustus and Aurelian, the large and strong fortress had been built, originally called the Hadrianum, afterwards the castle of S. Angelo, which encloses the Mausoleum of Hadrian^d, rendering this side of the city comparatively free from danger of attack, and therefore not needing the rebuilding of the wall, which was thought necessary in other parts.

It is, however, still a doubtful question whether this part of the wall, between the Ponte S. Angelo and the angle near the Porta del Popolo was rebuilt, or rather carried higher as in other parts, by Aurelian or not. There are the lower portions of some mediæval brick towers in this part, but whether any part of the brickwork is of the time of Aurelian or not is difficult to ascertain, since they are much altered and mixed up with modern walls.

Part of the wall between the Tiber and the Porta Flaminia was rebuilt by Nicolas V., in 1451, as appears from an inscription on the fourth tower from the river; and again rebuilt by Alexander VII. in 1662, as recorded also on the second tower in another inscription. The two flanking towers of the gateway were built by Sixtus IV., A.D. 1480, along with the church of S. Maria del Popolo, on the eastern side of it. The gateway itself was built by Vignola, under Pius IV., in 1561. The lower part of these towers is faced with square blocks of marble taken from a tomb which stood on part of the site of the Piazza del Popolo, supposed to have been the tomb of Nero. The church of S. Maria del Popolo was originally built by Pascal II. in 1099, as a protection against the

^d At the end of the present section this fortress will be fully described.

ghost of Nero, which was believed to haunt this spot^e. The inner face of it was re-decorated by Bernini, under Alexander VII., on the occasion of the arrival of Queen Christina of Sweden, in 1657.

2. "From the Flaminian Gate, with its gate, to the Pincian Gate (*closed*)—29 towers, 644 merlons, 3 pairs of corbels, 75 large external windows, 117 small."

The present gate is believed to stand about a hundred yards to the west of the old one, which was on the slope of the Pincian, at the other end of the church of S. Maria del Popolo. Procopius mentions it as standing on a steep place difficult of access^f. On the other hand Anastasius, in the ninth century, mentions it as liable to the inundations of the Tiber. The explanation of this suggested by Nibby is that this part of the Via Flaminia had been altered and continued on the level ground in the seventh century, before the time of Gregory II., A.D. 715, when the flood is mentioned by Anastasius. In the time of Hadrian I., A.D. 772—795, he again records that this gate was torn up by another flood from the foundations, and carried as far as the Arch of Marcus Aurelius, which stood in what is now the Corso, at the corner of the Via della Vite, a distance of nearly half-a-mile, which shews that the gate with its gate-posts must then have been of wood only, which is not likely to have been the case with the old gate of the time of the Empire, defended by Belisarius against the Goths.

This part of the wall is built up against the lofty scarped cliff of the Pincian Hill, and a considerable part of it is original, including the substructure of the old Palace of Sylla, called the *Muro Torto*, which has already been referred to; but many parts of it have been so much altered that in this portion of the wall the description cannot be verified, yet twenty-five towers can still be traced.

Between the Porta Flaminia and the corner of the Pincian (on which the old gate is supposed to have stood) is a piece of medieval stone wall of the style called *Saracenesco*, supposed to be part of the work of Ladislaus, King of Poland, in 1407, who repaired various parts of the walls. The parapet of this wall is of brick, of the kind called *lateritium*, in imitation of the walls of the Empire, and is part of the work of Benedict XIV., who is said in an inscription^g to have repaired the whole of the wall from the Porta Ostiense to the Porta Flaminia, in 1749—1752. Beyond this, close under the hill,

^e See the Appendix to this Section.

^f Procopius de Bello Gothico, l. i.

c. 23.

^g BENEDICTVS . XIV. P. M.
MURORVM . VRBIS . A . PORTA . OSTI-
ENSI

AD . FLAMINIAM . PORTAM
VETVSTATE . FATISCENTIVM
REFECTIONEM . ANNO . MDCCLI . IN-
COEPTAM
ANNO MDCCLII . ABSOLVIT

is a piece of modern brick wall of the eighteenth century, and then a straight joint where the wall turns towards the north for a short distance: this is supposed to have been the exact site of the old gate. Immediately beyond this is a very lofty brick wall, which has been building at great expense since 1850, with extremely ugly tall buttresses, behind which is part of the wall of the time of Sylla, which needed no such support.

The great Palace of Sylla, which occupied all this north-east corner of the Pincian Hill, is supposed by Nibby and others to have been the house of the Domitii, mentioned by Suetonius in the Life of Nero as being on the hill and overlooking the Campus Martius, but the construction does not at all agree with the time of Nero, and is clearly of the time of Sylla. The more probable site of the house of the Domitii^h is that now occupied by the French Academy, considerably to the east, and equally well overlooking the Campus Martius.

The residence of Belisariusⁱ as the Roman general, was afterwards, during the siege by the Goths, also on the Pincian Hill, and probably near the mound where the Belvedere^k now stands, and to the south-east of the old Palace of Sylla. The Porta Flaminia was blocked up with large stones by Belisarius. It was probably owing to this point being so well defended that the attacks were chiefly directed to the other end of the Pincian, near the Porta Salaria.

The old palace was destroyed before the time of Belisarius, as King Theodoric directs the marbles from the Pincian Palace to be sent to Ravenna, which implies that it was then in ruins. It would not have been consistent for him, who was at the same time spending a large sum on the embellishment and protection of the city of Rome, to have stripped a palace of its marbles, unless it was already in ruins. Six of the seven fortified camps of the Goths were to the north of the city between the wall and the river. The Milvian Bridge is mentioned as the communication with the seventh and larger camp on the other side of the river.

^h The exact site of the house of the Domitii is not known; there are some tombs and subterranean chambers of the first century remaining under the garden of the villa just outside of the Porta del Popolo, in them is reticulated work exactly agreeing with that in the Muro Torto. An inscription relating to this family has been found near here, but the exact site where it was found is not recorded. It seems almost cer-

tain that there must have been a villa or guard-house of that family, with a burying-place.

ⁱ Anastasius, in the life of S. Silverius (lx. No. 100), says, that Belisarius sent for the Pope to come to him *in the Pincian Palace*.

^k This is the highest point on the north side of Rome, and although this mound is usually considered modern, there is no evidence that it is so.

“The Goths not being able to invest the whole wall with their army, by forming five lines of circumvallation blockaded the space of five gates, extending from the Flaminian to that which is called the Prænestine Gate. But, as all these lines had been formed on this side the river Tiber, the barbarians feared lest the enemy by destroying the bridge, which is called the Milvian, might render all the country beyond the Tiber as far as the sea inaccessible to them, and thus they might feel only in a slight degree the evils that attend a siege. They therefore staked out a seventh line on the other side of the river, in the fields of Nero, that the bridge might be in the midst of their encampment¹.”

One of the fortified camps of the Goths was so close to this gate that Belisarius thought it necessary to block up the gate entirely during the siege. This camp must have been on the elevated ridge on the west or left-hand side of the road in going into this gate, and the scarped cliffs of an early fortification are distinctly visible from the road at intervals between the houses. It is, as usual, considered as a natural cliff only, but it has evidently been scarped. Being intended for temporary use only, no wall was built against it.

In part of the wall east of the Palace of Sylla, the work of Belisarius is plainly visible, and may be recognised by the rough concrete stonework which was usual at his period. Other parts of this wall with its towers were repaired by Nicolas V. in 1451, as appears by his inscription on the nineteenth tower; by Paul II., A.D. 1470, and Julius III., A.D. 1554, as appears by their arms and inscriptions; and by Gregory XV., A.D. 1622.

3. “From the closed Pincian Gate to the Salarian Gate—22 towers, 246 merlons, 17 pairs of corbels, 200 large external windows, 160 small.”

A large part of the northern wall of the city had been much damaged in the sieges by the Goths already referred to in the historical notices. It seems to have been constantly repaired afterwards by the Popes before mentioned, so that here also the description cannot well be verified, although some portions of the wall in this part are remarkably perfect, especially two or three of the fine tall square towers with their battlement and cornice, one only of which appears to be quite original and unaltered. Other parts of the wall between these two gates, and some of the towers, however, have been repaired in after times by Leo IV., and his work may be known by the peculiar alternation of brick and stone. Only seventeen towers are now visible in this part.

The actual structure of the Pincian Gate is said to be one of the three gatehouses rebuilt by the Exarchs of Ravenna, in the time

¹ Procopius de Bello Gothico, lib. i. c. 19.

of Belisarius^m, and the gate is sometimes called *Belisaria*, from the popular story that he sat at this gate and begged in his old age. This story probably arose from his having been refused admission by the Roman soldiers, when returning from an unsuccessful *sortie* so covered with mud that they did not know him.

There are several passages in Procopius relating to this gate.

“And when he saw that above half the enemy had crossed the [Milvian] bridge, he led out his army through the Pincian Gateⁿ.”

“He himself [Belisarius] held the Pincian Gate, and that on the right of it which is named the Salarian. For in this quarter the circle of the fortifications was least defensible, and the Romans had to march out against the enemy^o.”

“And thus in their flight they reached the fortified circuit of Rome, while the barbarians in pursuit came as far as the wall in the neighbourhood of the gate which is named Belisaria.”

“The Romans, fearing lest the enemy should burst into the enclosure along with the fugitives, were very unwilling to open the gates, though Belisarius urged them strongly, and cried out with threats^p.”

It seems that the gates did not open as doors, but slid up and down in the same manner as the *porte-coulis* or sliding doors of the Middle Ages, and the grooves of these sliding doors remain in the stonework of several of the gates of Rome^q. The construction of the present gate seems likely to be of the time of Theodoric, it agrees also with that of the other gates of his time, the Porta Appia and the Porta Ostiense.

4. “From the Porta Salaria to the Porta Nomentana—10 towers, 199 merlons, 2 pairs of corbels, 71 large windows, 65 small.”

Eight towers only can be traced in this portion, the modern Porta Pia probably occupying the site of the other two. A curious ancient drain remains near the Porta Salaria, projecting from the wall at about half its height; this is an exceptional arrangement, they are usually corbelled out from the battlement at the top of the wall, and the corbels remain in many instances in the angle, or rather the nook, formed by the projection of a tower.

^m The three gates were the Porta S. Sebastiano (Appia), Porta Ostiense, and Porta Pinciana. These three gates are very probably part of the work of King Theodoric, mentioned in his letters hereafter referred to.

ⁿ Procopius de Bello Gothico, lib. ii. c. 10.

^o Ibid., lib. i. c. 19.

^p That is to say, those who looked down from the tower could not at all

recognise a man whose features were disfigured by the dirt and dust, and so refused him admittance. (Procop. de Bello Gothico, lib. i. c. 18.)

^q These portcullis grooves, as they are usually called, may be seen also at the following gates:—Salaria, Tiburtina, Maggiore, Latina, Appia, and Ostiense; the use of them belongs to a still earlier period, as they occur also in the gates of Pompeii.

The part of the wall that was most attacked and most damaged during the siege of the Goths was that between the Porta Flaminia and the Porta Salaria; and the precise point where they made a breach is shewn a little to the west of the latter gate, distinguished by the bad repairs of that period. The wall as then rebuilt is carried on a low arcade, perhaps because arches would offer a better resistance to the battering-ram then in use. These low arches have very much the appearance of having been made to carry the *specus* of an aqueduct, and may have actually carried the Aqua Virgo, which passes in this direction and not far from this point^r.

We read in the account by Procopius of the fortification of the gates in this part of Rome, which shews that the attack was expected in this quarter.

“Belisarius provided in this manner for the safety of the city; he stationed himself at [between?] the smaller Pincian gate and the larger one which is at the right hand of it, and is called Salaria, because that part of the wall is more open to attack, and it affords an easy exit for the Romans to the enemy [for a *sortie*]. To Bessa he assigned the Porta Prænestina, to Constantinus he committed the Flaminian situated to the left of the Pincian, the doors being first closed, and a heap of large stones piled within for common use^s so that no one could open them. For one of the fortified camps of the enemy was very near, and he feared lest some of them should be insinuated into the city. The custody of the rest he committed to the commanders of different bodies of the infantry. Some of the aqueducts he filled up with strong walls, lest some of the enemy should slip in through them from without^t.”

5. “From the Porta Nomentana to the Porta Tiburtina—57 towers, 806 merlons, 2 pairs of corbels, 225 large windows, 200 small.”

This portion of the wall has also been much altered, only thirty-six towers can now be counted, but the Prætorian Camp here interferes with the line of the wall, and it is difficult to say which projections would be reckoned as towers by the chronicler.

A new gate, the Porta Pia, has been built to supersede the Porta Nomentana, by the modern Roman builders under Pius IX. in their usual bad taste, as inconsistent with the old city wall as possible. It is the most ugly of all the ugly modern gates of Rome. Part

^r It now enters Rome under the garden of the French Academy. It formerly went through the catacomb of Priscilla, where the remains of the old *specus* can still be seen. The line has been considerably altered in parts when it was repaired by the Popes.

^s That is, in case of an attack at this point; the large paving-stones piled up

inside the gate were ready for the “common use” of the soldiers defending the city, to throw down from the gallery over the gate on the heads of the assailants, one of the usual modes of defence at that period and long afterwards.

^t Procopius de Bello Gothico, lib. i. c. 19.

of the old Nomentana Gate is now (1871) still visible on the exterior, but the interior has been quite hidden.

There are two postern gates built up in the Aurelian wall, on the northern side of the Prætorian Camp, across the foss-way on that side, as the Porta Chiusa was on the south, shewing roads on both sides; and there seems to have been another road through the centre of the camp, with a gate in the outer wall called the Porta Decumana. It was used as a postern, and it was closed in the fourth century, when the outer wall was rebuilt after Constantine had dismantled this fortress.

The history of the Prætorian Camp is somewhat remarkable. We know it was built by Tiberius in the early part of the first century for the use of the Prætorian Guard, upon an old earthwork that served as a strong fortress for protecting this side of the city. On the side next the city there is no wall, and no traces of one visible; perhaps the old wall was entirely removed, and the materials used to build a considerable part of the new south wall. The north wall, of the time of Tiberius, remains nearly unaltered, and affords an excellent example of the beautiful brickwork of the first century, which is also seen in the towers at the south-east corner, but the east wall was evidently destroyed at the time that the fortress was dismantled by Constantine, as the construction of the greater part of it shews that it belongs to the fourth or fifth century. Within the north wall, the arched recesses, which formed the sleeping-places for the guards beneath the allure, remain nearly perfect in places, and what is most singular, retain remains of the original painting, of the first century, though in a very dilapidated state. Traces also of fourth-century painting are in places visible.

The Prætorian Camp is clearly described by Herodian as a separate fortress, with its own wall, in the time of Maximinus and Balbinus, *circa* 236, when the people rose against the Prætorian Guards, and driving them to their camp, attacked them there.

“But they getting the start, after some few had been wounded, fled to the camp, and closing the gates as well as they were able, and resuming their arms, guarded the *wall*, . . . and the soldiers with much experience armed the *battlements*, and passages [the allures], . . . they continued shooting at them with bows, and thrusting them off with long poles, and they drove them from the wall. Everywhere, therefore, there were assaults upon the *wall* of the camp^u.”

We next read of its destruction by Constantine. Zosimus writes:—

“[Constantine] having expelled the Prætorian soldiers, and dismantled their

^u Herodiani Histor., lib. vii. c. xi. and xii.

barracks, and settled everything at Rome, set out against the Germans and Gauls^x."

After it was dismantled by Constantine it was made part of the wall of the city, and the southern wall of the camp, built of the old squared stones, may be part of the reconstruction.

The Porta Chiusa, which is situated in the southern angle, has been already referred to as proving that a wall or a line of defence existed here before the time of Aurelian, and even of Tiberius, though the external work exhibits the usual character of the gates of Honorius, but without the towers. It was probably re-faced at that time, but its position with the Prætorian Camp so close to it, would have rendered the usual towers both unnecessary and inconvenient.

Between the Porta Chiusa and the Porta Tiburtina the wall has been very much repaired and rebuilt in places: the whole of the construction of the part within the outer wall is very rude and bad; the exterior is better, and one of the towers has been rebuilt of the old tufa blocks of the time of the Kings. There was a large reservoir of water supplied by an aqueduct here, in the bank within this part of the wall, to supply the Prætorian Camp; it was probably taken from the Marcian Aqueduct on the south side of the Porta Tiburtina, and as the level of the ground is higher, was here underground in the bank, and the wall was carried over it.

6. "From the Porta Tiburtina, with that gate to the Porta Prænestina—19 towers, 302 merlons, including the Porta Prænestina, 1 pair of corbels, 80 large windows, 108 small."

Between the Porta Tiburtina (S. Lorenzo) and the Porta Prænestina (Maggiore) the nineteen towers can still be counted, notwithstanding that an arch for the railway has cut through the wall near the Porta Tiburtina. The part of the wall nearest to the Porta S. Lorenzo to the south, was rebuilt by Sixtus V., A.D. 1586, at the same time that the Aqua Felice was carried within it, and bears his arms and inscription. The first three towers belong to his work, which extends to the very curious Castellum Aquæ Tepulæ, now part of the wall, and popularly miscalled the "House of Cicero." Beyond this, and near the railway, is another postern, consisting of a large square doorway, apparently the entrance to the Thermæ and Nymphæum of the third century, and probably closed by Honorius. The arcade of the aqueducts forms part of the wall from that gate to the Porta Maggiore or Prænestina.

^x Zosimi Hist., lib. ii. c. 17.

The arches of the aqueduct of Alexander Severus (?) near the Porta Maggiore, also built up in the wall of the Empire, are of the same quality as that of Aurelian, and can scarcely be distinguished from it, except that we see in the wall the brick piers of the lofty arches of an aqueduct of the third century, made use of to carry the *specus* of the Aqua Felice for a certain distance only, and then cease just in a line with the ruins of the great Castellum Aquæ which supplied the Nymphæum (?) or Pantheon (?) of the third century, now called the Temple of Minerva Medica.

The Porta Tiburtina itself is one of the gateway fortresses of Honorius, with the outer arch^y having piers of cut stone, and a range of small windows above, as usual in these gateways.

It is quite evident that the wall and gate of Augustus occupied the spot before Honorius built his fortress round it, but the foss-way having been filled up in the interval between those two emperors, the bases of the piers of his gates are at the present level of the soil, while those of the Arch of Augustus, which originally were at the level of the road-way at the bottom of the foss, are now buried as much as the foss was deep, probably ten or twelve feet.

The two flanking-towers on the exterior are square instead of round, as in the other gates of Honorius, but they have been evidently rebuilt since his time, though it is probable that the materials were in a great part used again. The square towers near to it, continuing the course towards the south as far as the Castellum Aquæ already referred to, have also been rebuilt in the same manner at later times. Behind the wall on the interior in this direction are seen the remains of another reservoir of the first century, built upon the same bank as the aqueducts. It seems to have been destroyed at the time the fortifications were raised by Aurelian, and little more than the foundations left to shew that it was there, shewing also by an external wall that it faced toward the east.

THE PORTA MAGGIORE is of the time of Claudius, *c.* A.D. 40, his aqueduct being carried over it, and on lofty stone arches on each side. The construction of this gateway of the first century of the Christian era should be carefully studied; it is built of very large masses of stone, worked after they were placed *in situ*, the columns not being properly columns at all, but part of the great blocks cut into the form of columns, and the capitals the same^z. These arches are

^y The inner arch at the same level was destroyed in 1870 by the Pontifical authorities, but one jamb of it, being built into the wall of a house, is preserved to tell the story.

^z This gateway is said to have given the idea to the architects of the sixteenth century of what is called THE RUSTIC ORDER.

filled up to about two-thirds of their height with smaller modern arches. The exterior of this fine gateway of the first century had long been almost entirely concealed by fortifications of the fourth, until they were cleared away.

The parts of the walls rebuilt by Honorius may in some parts be distinguished by the yellow colour of the bricks, as found also in his gatehouse towers, whereas those of Aurelian are red, often a dark red. The brickwork of both is of nearly the same quality, and fine brickwork, but not so fine as that of the arches of Nero, or the Prætorian Camp, or the Amphitheatrum Castrense, or the Lateran Palace, or the Porta Ardeatina, all which parts of the wall are of the first century. Brick towers filled up solid with earth were erected against each side of the gate, and the northern arch was blocked up altogether.

The southern tower was found to contain the curious tomb of Eurysaces the Baker, which had been placed between the two roads at their junction just outside of this gate, and its existence was entirely unknown until the excavations of 1838. The tomb was probably placed there in the time of Claudius, when the gate was made, and intended to form part of the decoration of the gate, being purposely kept low so as not to interfere with the general effect. Some think that it stood there before the gate was made, and belongs to the time of Augustus, the face next the gate being ornamented, though much concealed by the gate or rather by the pier of the aqueduct between the two arches of the gateway; there is, however, sufficient space for people to walk round it and read the inscriptions on all the four sides, and the outer side of the tomb was much richer than the inner one, having the figures of the Baker and his wife in good sculpture upon it. The level of the road has here been raised about ten feet, and the earth is excavated to that depth round the tomb to shew it complete, the base of which is level with the bases of the Arch of Claudius, and so standing on the original pavement of the roads which meet here.

When the work of Honorius was destroyed in 1838, which had formed his gateway fortress, the stonework of the gate, with the row of small windows over it, was rebuilt in a wall on the south side of the road, together with the fragments of the tomb of the Baker, part of which was destroyed, that part including the figures of himself and his wife, and a portion of the inscription. These might easily have been replaced in their original position, and might be so now with great advantage. This, with the aqueducts over it and on one side of it, is one of the most interesting objects among the antiquities of Rome.

That a great deal of rebuilding took place in the time of Arcadius and Honorius, is recorded in various ways, the most authentic being the inscriptions which remain on two of the gates at S. Lorenzo, and over the closed gate of the Porta Maggiore^a. The words of the three inscriptions are the same^b.

They record that the Senate had, on the motion of Stilicho, granted statues to the victorious generals, Arcadius and Honorius, on whom the title of "Semper Augustus" had been conferred on account of the walls, with their gates and towers, being restored, "by building up vast masses of stone construction^c." They add the name of the præfects, Macrobius and Longinianus, under whose care the statues were erected. The inscription shews that the gates were completed before the year A.D. 400, and it is probable that their statues were originally placed on the top of the gate over their inscription, but when the gate was altered they were removed or destroyed.

The wall for about one hundred yards is formed of the stone arcade of the Aqueduct of Claudius, terminating in a large square stone tower, which has been rebuilt of old materials. This tower stands out clear at an angle of the wall, while the lofty brick arcade of the third century, which forms the continuation of the wall in this part, forms a junction behind this square tower in an oblique direction northwards. These tall brick arches were filled up very soon after they were built, probably by Aurelian; the old *specus* was destroyed, and the piers cut down to carry the *specus* of the Aqua Felice, but the lower part of the early brick piers can be seen in many places, sometimes inside and sometimes outside of the wall of Aurelian, and some of his fine brick towers are built up against it.

The arcade of the Marcian Aqueduct passed under one of the lofty arches of Claudius, just to the north of the Porta Maggiore; this was in one of the angular pieces of the Claudian Arcade, similar to one at the Torre Fiscale, three miles from Rome, where the two stone arches one over the other can be distinctly seen; they are really

^a There was a third on the Porta Portuensis, destroyed in the sixteenth century, but the inscription was read and published by Nardini.

^b S. P. Q. R.

IMPP. CAES. DD. INVICTISSIMIS . PRINCIPIBVS

ARCADIO . ET . HONORIO . VICTORIBVS . AC . TRIUMPHATORIBVS . SEMPER . AVGG . OB . INSTAVRATOS . VRBI . AETERNAE . MVROS . PORTAS . AC . TVRRES . EGESTIS . IMMENSIS . RVDERIBVS . EX . SVGGESTIONE . V.C. ET . INLVSTRIS . COMITIS . ET . MA-

GISTRI . VITRIVSQ . MILITIAE . FL. STILICHONIS . AD . PERPETVITATEM . NOMINIS . EORVM . SIMVLACRA . CONSTITVIT . CVRANTE . FL. MACROBIO . LONGINIANO . V.C. PRAEF . VRBI . D. N. M. Q. EORVM.

^c The Latin "*ruderibus*" implies masonry of small stones mixed with lime, perhaps what we should call "concrete," of which the body of the wall consists, though the towers are faced with brick, and the gateway arches with cut stone. See Vitruv. de Architect., lib. vii. c. 1.

visible in the wall here, but not so distinct. The stone piers of the Marcian, with the three channels [*specus*] upon it, now forms part of the filling-up of one of the arches of Claudius, which was built over it at a right angle. The two arcades having been parallel to each other, it was only when the Claudian made a turn at a right angle for a short distance to break the force of the water, that it passed over the older and lower arcade of the Marcian; and one of these junctions occurs at this point. On the southern side of the Porta Maggiore the Claudian Arcade, which was there from north to south, soon resumes its ordinary course to the east, and forms part of the wall to the eastern extremity, where the aqueduct enters the precincts of the Sessorium. A large Castellum Aquæ extended from this junction to the angle where it turns again to the west, and forms the northern wall of the Sessorian Palace and gardens, the lofty stone arches being filled up with brickwork of Nero and Tajan, and the Aqueduct of the Aqua Felice having been built against the piers of the Claudian Arcade on the outside of this wall. There is no part of the wall of the time of Aurelian round the Sessorian Palace or gardens, and there is a short interval to the south of the Amphitheatrum Castrense before the Aurelian wall begins again.

7. "From the Porta Prænestina to the Porta Asinaria—26 towers, 504 merlons, 6 pairs of corbels, 180 large windows, 150 small ones."

A considerable part of the wall at the east end of the Sessorian garden has been lately rebuilt in the bad taste of the modern Romans. In this part one of the old towers that remain unaltered is built of the large quadrangular blocks of tufa in the style of the Kings; it has been rebuilt of old materials, but the existence of those materials on the spot agrees with the opinion that this was one of the detached forts of the time of the Kings. On the southern side of the gardens the outer wall of the Amphitheatrum Castrense is preserved as part of the wall, that of Aurelian passes behind it in a straight line.

A part of the fortification near to the Porta Prænestina, we are told by Procopius^d, was called the Vivarium^e. This is a narrow strip of ground between the outer wall, which has been part of the fortifications of the Sessorium, where it joins on to the Amphitheatrum Castrense, a wall of the time of Aurelian passing behind it.

^d Procopius de Bello Gothico, lib. i. c. 22.

^e The Vivarium was a place where wild beasts were kept for the amusements in the Amphitheatre. It is quite

possible that there were two Vivaria in Rome, one attached to each of the Prætorian Camps. The one so called under the Coelian is an ancient stone quarry only.

A narrow breach having been made in the outer wall at the end of this, it was taken possession of by the Goths; but the breach being narrow, the exit was difficult. Belisarius took advantage of this to lead the enemy into an ambuscade, allowing them to obtain possession of the Vivarium, and when they had marched in and were a mere tumultuous crowd without order or discipline, the door through the wall of Aurelian was thrown open^f, and his soldiers rushed upon them sword in hand, whilst they were in confusion. On that day in the Vivarium, and at the Porta Salaria, where a similar ambuscade had been equally successful, 30,000 Goths were slain, according to Procopius^g. The burning of their machines on this occasion alarmed their companions in the fortified camps to which they fled, and gave notice of the victory to the country round, which caused a general panic of the Gothic army.

This Vivarium was considered by the antiquaries of the sixteenth century to have been in the great foss on the south side of the Prætorian Camp, where the earthworks of an ancient semi-detached fort with brick walls of the Empire remain. It is marked as such in most of the older maps, and remains of some building, probably a fort, exist which explain this erroneous view.

To the west of this there is a space of bad wall of the construction of the sixth century, apparently built across a foss, probably by Belisarius; then a long piece of the wall of Aurelian, part very perfect with the arched passage in the interior of the wall, another part much damaged and badly repaired, probably during the siege by the Goths in the time of Belisarius. Then near the modern gate of S. Giovanni the brick wall of Aurelian is built upon a stone wall of old materials, with stone towers, probably part of the outer wall of a fortified house, possibly of the family of the Asinii, on or near this spot. The more recent Porta S. Giovanni is made at the high level to agree with the level of the new road.

THE PORTA ASINARIA has been described in the account of the gates, and it has been mentioned that the base stands on the level of the old external foss-way; the earth on the inside has been raised twenty feet by the filling up of the internal foss-way or raising the level of the road round the inside of the walls, so that at this gate the earth within is above the level of the top of the arch of the gate. Along this portion of the wall, we first have the fortifications connected with the Porta Asinaria of the second or third century, but

^f This door must have been destroyed when the monastery of S. Croce in Gerusalemme was built; part of *this* wall

of the time of Aurelian passed through the site of the monastery.

^g Procop. de Bello Goth., lib. i. c. 23.

much patched in later times, the towers cut away and the walls of them made into ugly sloping buttresses. Then we come to a piece of very rude bad wall, probably of the time of Belisarius, across the foss of the Lateran Palace about a hundred feet wide. Then a portion of the fortifications of the Lateran with the Lateran Gate walled up; the wall then turns at a sharp angle to the south to make use of the east front of the Lateran Palace, then turning the corner sharp to the west, the south front of the Lateran forms the wall for a considerable distance, the towers having been cut away, and again the side walls of them turned into ugly buttresses. Then a portion of the old palace of the first century recedes considerably, leaving a projecting tower: at this corner some of the windows of the first century are preserved. Within this portion of the present city wall are ruins of several chambers of the old palace, with underground works connecting them with the monastery and other buildings of the Lateran, which was outside the wall of the ancient city at the south-east corner of the Cœlian. Under the Cœlian itself the present line of the wall is possibly the same as the outer boundary of the old CITY, with the Marrana (originally the Almo) as a wet ditch to it.

8. "From the Porta Asinaria to the Porta Metrovia—20 towers, 340 merlons, 4 pairs of corbels, 130 large external windows, 180 small windows."

It is supposed that the name of Asinaria means, belonging to the Asinii, and that this gate led to their palace, on the site now occupied by the palace of Prince Massini, where the foundation of a palace of the first century can be traced, and a tomb of that period remains. Others say that a branch of that family took the name of Asinarius. That there was an officer of that name in the army of the Goths against Belisarius is mentioned by Procopius^h, who also mentions the gate.

"And it happened on that day that at one and the same time Belisarius and the army of the Emperor entered into Rome through the gate which they call Asinaria, and the Goths retreated thence through the other gate, which is called Flaminiaⁱ."

It is to be remarked that the old wall, which seems to be of the same period as the Asinarian Gate, suddenly ceases at about one hundred yards from the gate on its western side. The wall of the Lateran Palace, which is of earlier construction, commences after an interval of about thirty yards.

^h Procopius de Bello Gothico, lib. i. c. 7, 16.

ⁱ Ibid., lib. i. c. 14.

The Porta Lateranensis is not mentioned by the chronicler of the ninth century, having been closed long before his time, and he takes no notice of the closed gates. It is on the other side of the piece of rough wall which runs across the end of the old foss, and is on considerably higher ground just in the nook where the eastern face of this part of the Lateran Palace projects at a right angle from the line of the wall, which is made to incorporate it, in order to include also the southern face of that palace for a considerable distance. This part has been much mutilated, and the towers cut off; the two side walls of each tower being made into clumsy buttresses. At the western end of the palace the line again recedes considerably, with a tower at the corner, and here the old work is more perfect, and windows of the palace of the first century can be seen walled up. At the further corner of this receding part is another tower, of which the lower part is supported by the large square stones of the style of the Kings, but in this instance they seem to be built up against the foot of the brick tower. The upper part of this tower has been rebuilt by Nicholas V., *c.* A.D. 1451, as appears from his inscription upon it. Nibby considers this part of the wall as chiefly of the time of Belisarius, and the tower with its large stones piled up at the foot of it^k agrees with his description, but the general construction is not of the character usual in his time. A little further to the west is another tower, which is almost entirely of the old stones, but they may have been rebuilt, as they appear to have mortar between them, while the construction of the time of the Kings has not.

Some archæologists suppose that the Wall of the Kings in this part was not against the cliff, which is here low, this south side of the Cœlian being divided into terraces, but along the present line of the wall, making use of the stream for a wet foss, as it passes close under the wall from the Porta Asinaria to the Porta Metronia. This gate has also long been closed, although it seems to have been open in the ninth century. An inscription of the year 1157 records the repair of the tower by *the Senate*¹. This is on the inner wall of

^k These large stones were removed during the *restoration* of the wall in 1870.

¹ ANNO MCLVII. INCARNATIONIS
DOMINI NOSTRI IESV CHRISTI
S. P. Q. R.

HEC MAENIA VETVSTATE DILAPSA
RESTAVRAVIT SENATORES SASSO
IOHANNES DE ALBERICO ROIERIBVCCA
CANE PINZO FILIPPO IOHANNES DE
PARENZO PETRVS DOMINVS L. SALVI

CENCIO DE ANSOINO RAINALDO ROMANO NICOLA MANNETTO.

This inscription is upon the inner face of a square tower, which is built against the arch of the gate of Aurelian. It is also curious as giving the names of the Senators of that period, and taking no notice of any authority from the Pope, although in most parts of the wall the name and arms of successive Popes are conspicuous wherever any part has been repaired.

a square tower or gatehouse which is built against an arch of the time of Aurelian, now walled up, and upon a bridge over the stream which comes from Marino, and conveys the water from the Aqua Crabra and the Marrana combined, in the deep foss of one branch of the river Almo, which here enters the city under the present road which is made on part of this bridge. Signor Rosa has just made (1872) a new gate by the side of the old Porta Metronia.

9. "From the Porta Metrovia to the Latina are 20 towers ^m, 293 merlons of the battlement, 17 pairs of corbels, 100 large external windows, 183 smaller ones ⁿ."

These twenty towers may be counted, but they are of various periods; part of the wall and one of the towers is built of the large square stones of the kind used by the Kings, a considerable part is of the time of Aurelian, part has been rebuilt in the twelfth century, and another part in the sixteenth. In the bay next to the Porta Latina are remains of a Castellum Aquæ, through which the modern road passes; one of the towers and this part of the wall forming two sides of it, and exhibiting the remains of the cement for water called *Opus Signinum*, and the usual calcareous deposit of water.

The Porta Latina is one of the gatehouses of Honorius with round flanking towers, and is tolerably perfect though long closed. It has the Christian monogram A and Ω in the key-stone within, and in the interior are some remains of earlier work, apparently belonging to an aqueduct.

10. "From the Porta Latina to the Porta Appia," (now S. Sebastiano,) "are 12 towers, 174 merlons, 6 pairs of corbels, 80 large windows, 85 small ones."

The first three towers are in the upper part of the brickwork of the third century; the first has the lower part of travertine, in the same style as the stonework in the gateways of Honorius; the second has been restored in the twelfth century; the fourth, and fifth, and sixth, are of rough stone concrete; the seventh near the angle of the wall, has the *specus* of the aqueduct entering through it; the eighth is of large square stones in the style of the Kings, but probably arising from old materials being used up; the ninth and tenth are of stone concrete, which may be of any period; the eleventh of the large square stones again; the upper wall has an inscription of Pius II.,

^m It is remarkable that this number just stops short at the Castellum Aquæ, which intervenes between the twentieth tower and the Porta Latina.

ⁿ We give this portion of the Latin text as a specimen; the remainder is mere repetition of the same words, changing the figures only:

"A porta Metrovia usque ad Lati-

nam, turres 20, propugnacula 293, nec[essariæ] 17, fenestræ majores forinsecus 100, minores 85. A porta Latina usque ad Appiam, turres 12, propugnacula 174, neces[sariæ] 6, fenestræ majores forinsecus 80, minores 85." (Ex Anonymo Einsiedlensi, ap. Mabillon, *Analecta*, fol. edit., p. 266, col. 2.)

A.D. 1460; and other parts of the wall bear the inscriptions of Pius IV., A.D. 1562, Urban VIII., A.D. 1623, and Alexander VII., A.D. 1658, but these indicate repairs of small portions only. At the twelfth tower there is a break in the wall, as if the gatehouse of the Porta Appia was an insertion. The Via Appia is here a foss-way for the first quarter of a mile within the gate, and the same on the outside, with the earth supported by walls on both sides; these walls have been rebuilt or modernized, but the level of the ground has not been materially altered, and the tombs on the banks on both sides are partially concealed by these modern high walls against the cliffs.

In the part of the wall round this, the first Regio, it is on high ground, and is built against a cliff for nearly the whole of its course as far as this Regio extends, the ground inside being often twenty feet higher than it is on the outside. The corridor for the sentinel's path is perfect in this part.

The present structure of the PORTA APPIA or DI S. SEBASTIANO, is usually attributed to the Exarchs of Ravenna; it is more probably part of the work built by order of King Theodoric in the previous century, as mentioned in his letters preserved by Cassiodorus. The lower square parts of the two flanking towers of this gate are built of large blocks of marble, apparently taken from some previous building, and turned inside out, as projections which seem to be the tenons for holding the blocks together are now left projecting from the face of each block; but these may be merely the projections left for the purpose of raising the blocks by fixing the instrument used for that purpose, and are not necessarily a proof that the blocks have been used before, although that is probable. The marble is said to have been taken from the Temple of Mars, which stood at a short distance outside of this gate, and this appears probable; a large block of marble belonging to the cornice of a temple of the second century is now lying in a field close to the bank of the railway, on the left-hand side of the road (the Via Appia), and parts of the foundation of a temple are said to have been destroyed in making the railway, but no plans or drawings of it appear to have been preserved°. The upper parts of the two flanking-towers are round, and are built of brick very much in the style of the round belfry-towers of Ravenna, and the whole of the brick construction of the upper part of this gatehouse agrees very well with that construction, excepting that the old stone corbels of Honorius have been used again in some places.

° See Regio I., and the Appendix to this Section.

In the keystone of the inner arch a Greek cross with a Greek inscription has been incised, agreeing in character with the sixth century. The meaning of these two inscriptions is—the first, “By the grace of God;” the second, “SS. Conon and Georgius.”

On the jamb of the gateway is a rude figure of S. Michael incised in the stone, and an inscription under it rudely incised in characters of the thirteenth or fourteenth century^p, recording the retreat of an enemy from this gate, which is supposed to relate to Louis of Bavaria, who came into Italy in 1327.

In a letter of King Theodoric addressed to Maximianus and Andreus the senator, he

“recommends a careful study to augment the city, and spontaneous gifts as conferring a double grace. Nothing is more seriously fitting than the expenditure of money on the buildings of Rome. They should only discuss whether the result of the work is likely to be equal to the expense, and if any of the money collected remains not expended on the buildings it should be returned^q.”

In another letter, addressed to the Goths and Romans, he says :—

“The construction of the city in which the royal court is held is a worthy work, because it has been the glory of all times to repair ancient cities, in which both the ornaments of peace are required, *and the necessities of war guarded against*. It is therefore expedient that any one having stones lying in his fields that might be useful for the walls should give them up freely^r,” &c.

In a letter addressed to Count Suna or Sura by King Theodoric, he says :—

“You must not suffer to be idle anything that might add to the growing decoration of the city, because it is not wise to neglect opportunities, *and the squared marble* which now lies neglected is fit to increase your magnificence, for which reason you will see this work enjoined, that it may be employed *for the fabric of the wall*, and may return to its original use for public decoration, and may ornament some of the stone lying near the ruins. Also the metal of the public pavement may manifestly be made use of by you, because we are unwilling for the ornament of the city to violate private rights, and by rash presumption to cause calumny^s.”

In a letter addressed to Artemidorus, prefect of the city, he enjoins him —

“to see that the money sent for the buildings in Rome, which was of large amount, is properly applied *to the walls of Rome*, and no frauds permitted^t.”

P ANNO . DNI . M.CCC.
XXVII INDICIONE
XI MENSE SEPTEM
BRIS . DIE PENULTIM
A . IN FESTO SCTL. MICHA
ELIS INTRAVIT GENS
FORESTERIA MURIA IN VRB
E ET FUIT DEBELLA
TA A POPULO ROMA

NO QUI STANTE JA
COBO DE PONTIA
NIS . CAPITE REGIO
NIS.

^q M. Aurel. Cassiodori Variarum,
Epistolæ, lib. i. 21.

^r Ibid., lib. i. ep. 28.

^s Ibid., lib. ii. ep. 7.

^t Ibid., ep. 34.

To return to the Itinerary.

11. "From the Porta Appia to the Ostiense—49 towers, 615 merlons, 24 pairs of corbels, 330 large windows, 284 small ones."

The Porta Ardeatina is a short distance to the west of the Porta Appia, and again, as at the Lateran, the wall makes a sharp angle to include the old gate of the first century (described under the Gates), which faces the east, and not the south. It then continues again to the west, and soon arrives at a modern part, consisting of the great bastion of S. Gallo, a great engineering work of its day, but not of any archæological value, although it is built of the old materials, and the old construction is remarkably well imitated.

In the interval between the Porta S. Sebastiano and the Porta Ardeatina there are ten towers, the lower parts of which are of stone, and appear to belong to the time of the late Republic, or of Augustus; the upper part is of the brick construction of the third century. One of these towers has a substructure of the large square stones before mentioned, perhaps taken from the older wall.

The gate must have been closed before the time of the writer of the Itinerary of Einsiedlen, as neither he, nor the chronicler copied by William of Malmesbury, mention it^u.

The work of the time of Claudius is rather further on to the west, extending from the old fortifications on the cliff of the Pseudo-Aventine to the Tiber, and so enclosing the Aventine itself. In the part from the cliff of that hill to the Porta Ostiensis, and some way beyond it, this wall is carried *in* the old wide and deep foss of the Kings, as may be clearly seen by going on to the top of the gatehouse, whence the earth may be seen sloping down to the wall on both sides.

The gatehouse, as it stands, is a remarkably fine example of a gateway fortress of the fifth century, and is one of the three built by King Theodoric. The round brick towers with the battlements agree in construction with the brickwork of that period at Ravenna.

12. "From the Porta Ostiensis to the Tiber—35 towers, 733 merlons, 17 pairs of corbels, 138 large windows, 211 small ones."

^u On comparing the numbered list of gates given from the chronicler of Einsiedlen with that given in a previous section as being probably the list of gates referred to by Pliny, it will be observed that three are omitted, Porta "Chiusa," shewing it was at that time "closed," Porta Lâteranensis, and Porta Ardeatina, also closed then as now. Hence,

in the former list, Porta Ostiensis was the fifteenth gate; in this list it is the twelfth. The total number of gates noted by the chronicler is exactly fourteen, and that is the number expressly mentioned by Procopius in the fifth century, though he unfortunately gives only the names of a few.

This part of the lofty brick wall of the third century is built upon the *agger* of Claudius, which also turned the corner, and was continued along the bank of the river as far as the Emporium of Sylla, and may be seen from the opposite bank of the river when the water is low. The brick wall is not carried so far, it ceases opposite to the line of the wall of Aurelian in the Trastevere. The interior of this portion of the wall, from the Porta Ostiensis to the river, is mostly of the time of Aurelian, with his lofty arches and passages as usual on the inside of the wall; but the outside has for the most part been badly repaired by the Popes, and is again in a ruinous state, very picturesque, but not of much archæological interest.

Passing over into the TRASTEVERE, the chronicler of Einsiedlen begins with the gate near the southern corner.

12*. "From the river Tiber to the Porta Portuensis—4 towers, 59 merlons, 10 large windows, 15 small."

This short piece of the wall of Aurelian has been entirely destroyed^x, and the position of the gate altered in modern times.

The old gateway, or Porta Portuensis, was on the road to Portus through the southern wall, which connected the Janiculum with the Tiber at a point opposite to the Emporium, and where the wall of Aurelian on the eastern bank commences. Whatever may have been the date of the original gate, there was certainly a gate here in the time of Honorius, which remained standing to the time of Urban VIII., A.D. 1640, with the inscription upon it identical with those which still remain upon the Porta Tiburtina and Porta Maggiore. The new gate is in the new line of wall, which commences inside the older one considerably to the north of it, but crosses it after some distance, and then includes a much wider space, connecting the Janiculum with the Vatican Hill.

13. "From the Porta Portuensis to the Porta Aurelia—29 towers, 400 merlons, pairs of corbels, 137 large windows, 163 small ones."

The distance indicated by the number of towers shews that the Porta Aurelia of this author is the same as that now called Porta S. Pancrazio; picturesque ruins of this part of the wall in the vineyards and gardens within the modern wall are all that remain, but the old

^x During some excavations made in December, 1870, the foundations of the Wall of Aurelian were found in three places in the large vineyard outside of the Porta Portuensis, giving the line di-

rect to the Emporium. On the banks of the Tiber, when the water is low, the foundations of the end towers can be seen on each side.

wall is still of considerable height, and the wide and deep ancient foss remains, as the French army found to their cost at the siege of Rome in 1848, when, after making a breach through the outer wall, they were a second time repulsed by a sharp volley of musketry from the Roman citizens posted behind the old wall and foss, which the French could not pass until they had battered a breach in this also.

This gate is sometimes also called Aurea, because it is on that part of the Janiculum which consists of sand of a golden colour, whence that is often called Montorio, a corruption of Monte Aureo. It is also sometimes called Porta Janiculensis, from being originally the entrance into the fortress on the Janiculum.

The name of S. Pancratius seems to have been used as early as the time of Procopius, and there is little doubt that all three names have been used at different periods for the same gate.

“Then Belisarius with his men, being received in safety, ordered the soldiers and nearly the whole Roman people to the walls; they lighted fires and watched all night, and going round the fortifications he appointed a special officer to each gate. Among these, Bassas, the keeper of the Porta Prænestina, sent to Belisarius to announce that he must hold the city against the enemies, who had entered by the gate on the other side of the Tiber, which is called after S. Pancratius^y.”

In continuing the Itinerary of the Chronicler, we read:—

14. “From the Porta Aurelia to the Tiber—24 towers, 327 merlons, 11 pairs of corbels, 160 large windows, 160 small ones.”

The lower part of this wall and of the towers can be seen in the vineyard outside of the Porta Septimiana. Three of the towers of Aurelian between that gate and the river are nearly perfect, though much concealed by modern houses. The earth is much higher within the wall, and the lower part of the wall is built against the cliff. In the upper part the mills are made in the old towers, on the steep slope of the hill, one above the other.

The Einsiedlen chronicler, as well as William of Malmesbury, passes over the gate called the *Porta Septimiana*, but some gate must have existed on the road leading northwards from the Regio. It is remarkable that the only evidence of this name is in the Life of Septimius Severus^z, where it is spoken of as the gate *called by his*

^y Procopius de Bello Gothico, lib. i. c. 18.

^z “Opera publica præcipue ejus extant, Septizonium et thermæ Severianæ. Ejus denique etiam januæ [balneæ] in Transtiberina regione ad portam nominis sui, quarum forma intercidens statim usum publicum invidit.” (Æl. Spartian. in Vita Severi, c. 19; inter Hist. Aug. Script.) The text is imperfect, and the

reading is therefore obscure. It probably means that “most of his principal works were standing [at the time his biographer was writing]. The Septizonium, the Thermæ Severianæ, and also the baths(?) in the Transtiberine Regio, near to the gate which bore his name, and the conduit of which cut off the water supply [of the Alseatina] which belonged to the public service(?)”

name, and it is implied that it was close to his baths, or at least to the channel of water which supplied them. He lived some eighty years before Aurelian, and therefore the wall of Aurelian in this part of the city, as elsewhere, must have been built on some older *agger*, but whether used as a line of fortification or to carry the water to the baths there is no evidence to shew. It is also difficult to assign a cause for the destruction of the gate, as it would be only reasonable to suppose that the line of traffic along the road near the bank of the Tiber would have been increased rather than diminished by the addition of the Leonine city, and the road must have passed through the wall near this point. There is to the present time a gateway here, called by the same name, but its structure is medieval, of the time of Alexander VI., A.D. 1500.

The circuit of the Trastevere Regio is complete, but the chronicler continues his description, in order to bring his reader round to the spot whence he started.

14—I. “From the river Tiber to the gate of S. Peter—9 towers, 489 merlons, 21 large windows, 7 small ones, 2 posterns.”

Along the bank of the Tiber, on its eastern side, are traces of a wall. As has been said, the bases of the towers only are visible, and these not sufficiently prominent to be marked upon the maps. There is little doubt, however, that this is the wall with the towers, which is referred to by the Chronicler. It commenced probably at the point exactly opposite to that where the Aurelian wall of the Trastevere closed, and this spot is clearly marked in the maps, and is ascertained by the remains still existing. It was continued, as we are told, to the gate of *S. Peter*, which is the very point from which the Chronicler commenced his itinerary. It is called in the account of William of Malmesbury, *Porta Cornelia*, while by Procopius it is called *Porta Aurelia*, but both give as a synonym the name which our author uses, namely, the gate of S. Peter.

The next entry, and last of the series, differs in form from the others.

“[Near] the gate of S. Peter in the Hadrian [fortress] [in Hadriano] there are 6 towers, 164 merlons, 6 pairs of corbels, 14 large windows, 19 small ones.”

This is the last entry in the Itinerary of the chronicler of Einsiedlen. It will have been observed in the previous paragraph he had brought us *to the* gate of S. Peter. He now speaks of the forti-

There is—I. A doubt as to the reading of *balneæ*, ‘baths,’ or *januæ*, ‘gates;’ 2. *Forma* may not in this case mean ‘a conduit:’ 3. The word ‘*intercidens*’

admits of two meanings; and 4. *Invidit publicum usum* cannot be construed as it stands.

fication *at the* gate of S. Peter's *in* [the fortress of] Hadrian. It was at this point that his survey begins and ends.

HADRIANUM ^a.

The great mass of this enormous structure consists of the Mausoleum or Tomb, the erection of which was commenced before A.D. 138; it is a massive circular tower about a thousand feet in circumference, standing originally on a square basement, and faced with large square blocks of peperino, each side being about two hundred and fifty feet in length. It was originally faced with Parian marble, according to the description of Procopius, and had statues of the same material at the top. But the great mass of this enormous structure is of concrete, *faced*, at different times and in different parts, with marble, stone, and brick. In the centre of the mass is the sepulchral chamber in the form of a Greek cross, sadly mutilated, in which was the sarcophagus now removed to the Vatican Museum.

We learn from the biographer of Hadrian ^b that his tomb was at least begun during his lifetime, and that at the same time a bridge was made. The reason assigned by Dion Cassius ^c is that the Mausoleum of Augustus was full. It is probable that Hadrian also wished to have a grand mausoleum for himself, and from the bridge being built along with it, there seems every probability that he always intended it to be part of the fortifications of the city which were being carried on at the same time.

An inscription is mentioned by the Einsiedlen chronicler ^d as existing in his time upon the fortress, implying that the work was not completed till some fifty years after Hadrian's death, namely, under Aurelius Commodus, i.e. A.D. 192, the death of Hadrian having taken place A.D. 138. There is nothing improbable in assigning this length of time for the completion of the building, when the massive structure is taken into account, and the many chances of interruption in the work.

^a See the Appendix to this Section.

^b "Romæ instauravit Pantheum, Septa, basilicam Neptuni, sacras ædes plurimas, forum Augusti, lavacrum Agrippæ: eaque omnia propriis et veteribus nominibus consecravit. Fecit et *sui nominis pontem, et sepulchrum* juxta Tiberim, et ædem Bonæ Deæ transtulit." (Ælii Spartiani Hadrianus, c. 19, ap. Script. Hist. August.)

^c Cassii Dionis Cocceiani Rerum Romanarum, lib. lxi. c. 23. ed. Imm.

Bekker, t. ii. p. 332. Lipsiæ, 1849, 8vo. de Vita Hadrian.

^d "IN ADRIANIO. Imperatori Cæsari, divi Marci Antonini Pii, Germanici, Sarmatici filio, divi Pii nepoti, divi Hadriani pronepoti, divi Trajani Parthici abnepoti, divi Nervæ adnepoti, LUCIO ÆLIO AURELIO COMMODO Augusto, Sarmatico, Germanico, Maximo, Britannico, Pontifici Maximo, tribunici potestat. xviii. Imperat viii. Consuli vii. Patri Patriæ." [i.e. A.D. 192.] (Vet. Analecta, &c., p. 359, c. 2.)

With regard to the bridge which is mentioned as built by Hadrian, it seems clear that it is the present Ponte S. Angelo, connecting his tomb and fortress with the city. The upper part of this bridge only is modern; the piers are ancient, as may be seen from the river. The chronicler of Einsiedlen^e has preserved an inscription which he says existed on the bridge of S. Peter. The inscription implies that the bridge was constructed in A.D. 134, i.e. four years before Hadrian's death, and consequently the historian would very reasonably attribute it to him.

The Mausoleum of Hadrian, or *arx* or citadel of S. Angelo as it was afterwards called, was an important part of the defences of Rome for many centuries. It is repeatedly mentioned by Procopius, writing A.D. 530, at the time of the siege of the Goths under Belisarius, and again under Totila, as an important position and as part of the fortifications. In his nineteenth chapter on the Gothic war [A.D. 537] he describes the position of the enemy in this manner. They had pitched six separate camps to the north of Rome, thus threatening the whole length of the walls of the city from the Porta Flaminia to the Porta Prænestina. In addition to this, fearing that the Milvian Bridge might be destroyed, and so cut off their communication with the land on the other side of the Tiber, the Goths had pitched a seventh^f camp in this part, in the *Campus Neronis*, to the north of the Regio of the Trastevere (as has been said), and then he adds:—

“And so two other gates became threatened by the enemy, that is to say, the Porta Aurelia, which is called by the name of S. Peter, who was the chief of the Apostles, because he is buried near it, and the gate which is on the other side of the Tiber^g.”

The Porta S. Petri is clearly the gate near to the tomb of Hadrian, although not on the same side of the river as the Church of S. Peter. The gate “on the other side of the Tiber,” Procopius refers to elsewhere, and speaks of it as the same as the Porta S. Pancratii. It is easy in looking on the map to understand that the gate of S. Peter was more open to attack from the western than from the eastern side

^e “IN PONTE SANCTI PETRI. Imp. Cæsar, divi Trajani Parthici filius, divi Nervæ nepos, TRAJANUS HADRIANUS Augustus, Pontif. maximus. Tribuniciæ potest. xviii. Cos. iii. P.P. fecit.” [i.e. A.D. 134.] (*Vetera Analecta*, &c., p. 359, col. 2. Fol. edit. Paris, 1723.)

^f See Porta Flaminia, p. 133. The sites of all these seven fortified camps can still be distinctly traced. The seventh being the one on the other

side of the Tiber, close to the Milvian bridge, is much larger than the rest; it is now a meadow surrounded by a bank and a foss, in which is the modern road; this is the ancient earthwork of the Goths. The others are on low hills, with the cliffs scarped all round, now occupied by modern villas.

^g Procopius de Bello Gothico, lib. i. cap. 19.

of the river, there being here the bridge connecting the two banks. There was no approach to it from the north, as the wall of the city was continued along the bank of the Tiber, and thus afforded a most sure protection.

In his twenty-second chapter, Procopius describes the attack upon this gate and the Mausoleum of Hadrian :—

“In the meanwhile the Goths attacked the Porta Aurelia in this manner. Outside the Porta Aurelia, at about a stone’s throw from the walls, is the Tomb of Hadrian, a remarkable sight, and well worthy of being described.

“For it is built of Parian marble, and the stones fit so perfectly together that they require no fixing [by mortar]. Its form is equilateral, and the length of each side is about a stone’s throw. Its height exceeds that of the walls of the city. On the top are seen wonderful statues of men and horses, carved also out of marble.

“And since the tomb was seen to be a stronghold commanding an enemy’s country, the ancients had made it a part of their fortifications, by joining it to the circuit of the city walls by two ‘curtain walls^h.’ And it also has a high tower, which protects the neighbouring *gate* [i.e. Porta Aurelia].

“And since this fortress was most conveniently situated, Belisarius committed it to the charge of Constantine ; and he commanded him also to take special care in guarding the *neighbouring wall*, because it was badly guarded.

“Because although on account of the river which flows by being in the way, the wall here would less likely be attacked, still he thought that the impression should not be given that he had placed in this part scarcely any guard at all, and that the soldiers were posted only in places where there was the most need for them. He had indeed very few troops, since the Imperial forces which he had in Rome at the beginning of the siege amounted at most to but about 5,000 men.

“Constantine having obtained information that the enemy were preparing to cross the Tiber, fearing for the wall in that part, set out with speed to guard it with a small body of men, leaving some to take care of *the gate and of the tomb*, which were more important.

“In the meantime the Goths *attacked the Aurelian Gate and the fortress of Hadrian*, not with war engines, but simply trusting to an ample supply of scaling-ladders and arrows, for they had made up their mind that they would thus more easily reduce the enemy, and that they would meet with less trouble from the guard which was posted here, because of its small number.

“Bearing before them their shields, scarcely inferior to the skin-covered bucklers of the Persians, they advanced, and, although close to the enemy, they lay concealed from him, for they were hidden by the *Porticus which belongs to the Church of S. Peter*. Hence, having burst forth suddenly, they advanced so rapidly that neither the *balistæ* as they call them [catapults] could be brought into play, because these machines will only throw their projectiles straight in front, nor could anything be done with the arrows, because they were met by the opposing mass, formed by the shields. The Goths approached quickly, casting their weapons on to the battlements, and they were preparing to fix their ladders against the wall : the defenders of [Hadrian’s] tomb were then surrounded on all sides, and more-

^h This seems to be what is implied by the Greek words used, but they are somewhat obscure.

over they had been attacked continually in the rear, whenever they moved forward. For some time the Romans, despairing of making their escape by force, were giving way to terror. Then suddenly with one accord they broke down nearly all the larger statues [on the tomb], and seizing on the great stones with both hands, they threw them down upon the heads of the enemy. They thus forced a retreat. . . . From which it happened that all the neighbourhood of the Porta Aurelia remained safe."

The *Porticus* belonging to S. Peter, behind which the Goths concealed themselves before they rushed upon the fortress of Hadrian, was probably a covered way leading from the bridge up to S. Peter's Church. A similar Porticus is recorded to have been made in later times from the walls to the Church and Monastery of S. Lorenzo outside the walls, the object being to protect pilgrims from the weather and from robbers. The site of course cannot be fixed for certain, but it is very probable that a great part of its line is that occupied by the present passage or covered way to the Vatican made upon the top of the Leonine wall, to which reference will again be made.

The reference to the two shorter walls connecting the fortress with the *enceinte* of the city (and the Greek text seems to imply not less than this) is more difficult to understand, as the modern arrangements of the streets at this point have naturally obliterated all traces, and so we have nothing left to guide us. From the description, it would seem that the tomb was encircled by a wall, and as it had no connection with the bridge, standing as it did by itself, two short walls, one starting from the south-west corner, running by the side of the river, the other from the north-west corner, met at the western end of the bridge. The bridge itself partaking of the nature of a fortress, the outwork of the Hadrian tomb was thus brought into connection with the main fortifications.

In his fourth book, which refers to the fifth siege, and so to events some fifteen years after the attack just described, Procopius writes :—

"Finally, considering that the Goths, divided as they were into small parties, would not be able for the future to guard the whole circuit of Rome he [Totila] enclosed a limited portion of the city, in the neighbourhood of the tomb of Hadrian, with a wall of small extent, and connecting it with the former wall, he set up the show of a fortress. There the Goths, depositing the most precious things that belonged to them, guarded this fortress with the greatest care [A.D. 552]ⁱ."

The next account we have of the mausoleum is that in the time of the great pestilence, A.D. 590, S. Gregory the Great saw a vision of an angel standing upon it and staying the plague, and built a chapel on the top dedicated to S. Michael the Archangel, whence it received the name of the *arx* or castle of S. Angelo. This name

ⁱ Procopius de Bello Gothico, lib. iv. cap. 33.

is mentioned by Liutprand^k. In the ninth century it was occupied by the Counts of Tusculum. Count Adelbertus, called the Rich, is mentioned as residing there with Theodora, A.D. 908; and their daughter, Marozia, and that same Albericus who became lord of the city in 928. Count Hugh then obtained possession of it by marrying Marozia.

The fortifications were increased by Crescentius, or Censius Nomentanus, the consul, to defend himself against Otho III., A.D. 1000, and from him it was sometimes called *Castellum Crescentii*. So that during the tenth and eleventh centuries it was considered as the castle of the family of Crescentius, the family to which Marozia belonged. In 1084 Gregory VII. took refuge in it, and was besieged for two years by the citizens, until he was rescued by Robert Guiscard and his Normans. As this castle commanded the Bridge, and the direct line of communication with S. Peter's and the Vatican, it was very important to the Popes to have the command of it. But this was by no means always the case. Rome was divided into two great factions, and if the legitimate Pope did not belong to the faction which held the *arx*, they frequently set up an anti-pope for themselves; and in 1130, Anacletus the anti-pope succeeded in expelling Innocent II. from Rome, and obtained possession of the whole city, but in 1141 the party of Innocent again prevailed, and he obtained possession of this citadel. This being connected by the wall of the Burgo or Leonine city with the Vatican, they were usually held together by the Pontifical party.

In 1149 it was held by the Senator Pietro Leoni, belonging to the party opposed to the Pope, who ordered its demolition, together with all the castles of the Frangipani, the party opposed to him, but his orders were only very partially obeyed. During the residence of the Popes at Avignon, the castle was held by the King of Naples. It was a perpetual point of dispute between the Guelphs and the Ghibellines, until the people, wearied of both, rose in their own defence, and appointed Adotto degli Stefaneschi dictator. Under him the citizens seized the castle, and would have demolished it with other baronial strongholds, but the Orsini returned to power in time to save it. On the return of the Pope from France the keys of the fortress were sent to Gregory XI. at Corneto, where he had landed; but it was soon afterwards betrayed to an anti-pope, by a French castellan, who made war upon the citizens, and burned many of their houses, in revenge for which

^k Liutprandi Antapodosis, lib. iii. c. col. 450, E; and ap. Pertz, Mon. Germ. 12; ap. Murat. Rer. Ital. Script., t. ii. Hist. Script., t. iii. p. 313, l. 5.

they besieged the castle for a whole year, and eventually obtained possession of it by a rigorous blockade, and the garrison was obliged to surrender in 1378. The citizens then endeavoured to destroy the building, which was saved only by the strength of its construction, but it was stripped of its marble covering.

Alexander VI. (Borgia), A.D. 1495, raised the walls, and added the *machicoulis*, still existing; he also rebuilt the bridge, and made or restored the covered way on the wall from the Vatican, commenced in 1417. The large square tower on the top of the mausoleum was built by Alexander VI., A.D. 1500, who also rebuilt the upper part of the Rotunda; his work is visible from the bridge. The celebrated dungeons are part of his work.

The *arx* was again damaged by a siege in 1527. It was again largely repaired by Clement VII. (Medici), and the work was resumed by Pius IV. (also of the Medici family). The upper range of building was restored and decorated under Paul III., *c.* 1540. The handsome suite of rooms now usually exhibited belong to that period, with painted ceilings of the sixteenth century. A number of frescoes of the same period remain, and some of the fifteenth, with some quaint chambers also. In the courtyard there is a curious piece of iron grille, with a quatrefoil in the centre, probably of the fifteenth century. The present chapel is modern. Urban VIII. (Barberini), in 1644, constructed the outworks, and supplied it with cannon by melting down for that purpose the magnificent bronze ornaments of the Pantheon. The large bronze figure of the angel is the work of a Dutch artist employed by Benedict XIV., *c.* 1750.

THE LEONINE CITY.

The passage or covered way from the palace of the Vatican to the castle of S. Angelo already mentioned, is built upon the north wall of what is usually called THE LEONINE CITY; and a considerable part of the wall of the ninth century remains, as is evident from the construction, which agrees with that of the walls of the churches of that period. The battlements, with the *machicoulis* under them, were added or rebuilt by Alexander VI. (1492—1503.) Various repairs were made by Pius IV., 1559—1566, and by Pius V., 1566—1572. The arms of these Pontiffs are carved in those parts which they built respectively, and in some instances their names are inscribed also. This passage remains perfect, and is still used occasionally. The portion next the castle of S. Angelo is modern. The damaged parts were carefully restored in 1867.

It is difficult to trace the wall on the southern side of the Leonine city. The Vatican Hill had been occupied and perhaps rudely fortified from the time of the Kings, and there was a Palace on the same site in the time of the Empire, with gardens attached. S. Peter's was originally within that Palace, on the site of the Temple of Apollo, under which was a Catacomb which was the burial-place of the early bishops of Rome, and a church, we read, was built over the Catacomb in the time of Constantine, so that the whole district had probably some kind of fortification.

The very picturesque round towers and walls of Leo IV., with their projecting parapet boldly corbelled out, remain in many parts, chiefly in the garden of the Vatican, but most of the parapets and corbelling have been renewed in the fifteenth century, when the Vatican Palace was rebuilt. The walls of the present museum and library are part of the work of that period.

There are several gates remaining in the portion of the old wall that is preserved, some of which have corresponding openings through the modern wall, others have not.

Beginning from the Castle of S. Angelo, the first is called Porta di Castello, and occurs in both walls, with a short street connecting them.

2. The name of Porta Angelica is now given to the second aperture in the outer circuit, and a street called the Via Angelica connects it with the old gate opening into the Piazza di San Pietro; this gate is said to have been named from the sculptures of angels upon the outer gateway. There are at present three other gates through the old wall at the end of the streets in the southern part of the Borgo. The old gate was called Porta S. Petri; there were two gates of that name, one from the city, the other from the country.

3. PORTA S. PEREGRINO, which is said to have been the name of one of the three original gates of Leo IV., and to be so called from a church of the same name behind the Pontifical Palace near the Porta Angelica. It seems more probable that it was a popular name for one of the gates near S. Peter's, much used by the pilgrims—*Pellegrini*.

4. PORTA SAXONIA is believed to have been one of these posterns near the church of S. Spirito in Sassia; it was also called Porta Nova in the fifteenth century, which probably shews that it was then recently made in the Leonine wall.

5. PORTA VIRIDARIA is said to have been a name for one of the three gates of Leo IV., opening into his garden.

The present Vatican Palace is a building of the fifteenth century,

outside of the old wall of Leo IV., and for that reason is fortified with *machicoulis*. It is mentioned by that name in the fifteenth century.

6. PORTA PERTUSA is a name given to a gate pierced through the wall of Leo at the western angle, and retained in the modern wall, which almost joins the old one at this point. This name is mentioned in 1481.

7. PORTA FABBRICA was the gate made for the workmen of S. Peter's, on the south side, and the name is retained in the modern wall.

8. PORTA CAVALLEGGIERI, from some cavalry barracks established near it by Pius IV., after the return of the Popes from Avignon. It is on the south side, between the Porta di S. Spirito and the Porta della Fabbrica. It is mentioned in 1481. This was also called Porta Turrioni or Torrioni, from the great tower by the side of it.

9. PORTA S. SPIRITO is the name still retained for the gate near the great hospital so called, on the bank of the Tiber in the Leonine city. It was also called Porta delli Nibbii in the fifteenth century, when Ladislaus, King of Naples, went out by that gate in 1409 on his way to Viterbo¹.

MODERN FORTIFICATIONS.

THE modern fortifications made under Pope Urban VIII. have joined the Vatican and the Regio of the Trastevere in one large *enceinte*. As will be seen by the map, they took the most westerly point [the Gate of S. Pancrazio] of the Transtiberine Regio, and then followed the ridge of hills along which the old Via Aurelia passed till they met the Leonine wall, which, as has been said, they followed for a short distance on the southern side, but on the northern side the walls have taken a much larger sweep, so as to include the gardens of the Vatican as well as the Mausoleum of Hadrian^m.

¹ *Diarium Romanum*, apud Murator. *Rerum Italicarum Scriptores*, vol. xxiv. col. 999, D.

^m See the Appendix to this Section.

APPENDIX TO CHAPTER II., SECTION IV.

NAMES OF THE GATES.

THE names of the gates are very puzzling to those who have not studied the subject. The same name is often given to two gates, and the same gate is called by different names according to circumstances, but the matter is very simple when once properly explained and understood. Each gate must be considered with reference to the road for which it was made. Every town, and every *pagus* or fortified village, on the hills round Rome, had its own road direct to *the City*. This road was intended for horses and cattle only, not for carriages; it therefore was made in a straight line over hill and dale, and across the great trenches or fosses round the City, whether of the outer *mœnia* or of the inner wall. Each road passed across these either in a straight line, or obliquely, as convenient. The road was directed to the gate in the inner wall of the City, the wall commonly called the Wall of Servius Tullius, who completed the fortifications of the City, when the seven separate fortresses were combined into one City. These roads had previously to pass across the outer *vallum*, or *agger*, or bank, which, with the trench on each side of it, was called the *mœnia*, and gates had to be provided in this bank for them to pass through. Two or three of these roads usually met at one of the gates of the City, but in the outer wall there was often only a postern provided for it. The use of carriages on four wheels was not permitted within the walls of Rome in the time of the Republic, but the carts on two wheels must have been used to carry salt from the salt-wharf to the town or village from which they came, and to bring the *puzzolana* sand in exchange for it (such having been the trade at a very early period). We know also that the triumphal cars went through the principal streets. Nevertheless there were no carriage roads until the time of the Empire; these were made chiefly in the second and third centuries, originally at the low level of the bottom of the trenches, and the foss-ways in the Campagna, many of which can still be seen by the side of the present roads, still remaining in a trench, and still often used for cattle. Postern-gates were made through the wall of Aurelian in many places for these roads, and may be seen in the walls, though they have been built up for many centuries, probably when the gateway fortresses were made, in the time of Honorius, about the year 400. At that time two or three

of these old bridle-roads were made into one carriage-road on the higher level, that is, on the natural level of the ground. In some instances this was not done until a much later period, as at the Porta S. Giovanni, the road on the high level was not made until the seventeenth century, when that gate was made. The new road from it was carried upon an embankment across the valley (here used as the great outer foss of the Empire), in an oblique direction for about half-a-mile, when it joined the old road on the outer bank of this valley. The old road at the bottom of the valley that passed through the Porta Asinaria, and was called the Via Asinaria, still remains in use as a cart-road, and a continuation of it runs between the Via Appia Antiqua and the Via Appia Nova, as far as the Via Latina, and beyond that for some miles as a farmer's road only.

The Porta Maggiore, which is the principal gate on the eastern side of Rome, is called by several names. The original name was probably Porta Sessorii, for it was the principal entrance to the Sessorium, the great fortified palace of the later kings, and this name would be used by persons going there. It was also called Porta Labicana by the natives of Labicum going along that road to their home, and Porta Prænestina by those of Præneste, who went along the other road that passed through this gate, thus passing either along the Via Collatina, the road through Collatia, or the Via Gabina or road to Gabii. Præneste was the more important town, and therefore gave its name to the gate. It is probable that the original carriage-road passed over the Ponte di Nona, a very ancient bridge, at the ninth mile on this road, after which one road goes to the right through Gabii, and the other to the left direct to Præneste. Frontinus, in describing the Aqua Appia, gives the name of Via Prænestina to the Via Collatina; it was therefore considered in his time as the direct road to Præneste, but the road through Gabii is not much longer, and was afterwards used for the carriage-road. The two carriage-roads, Labicana and Prænestina, passed through the Porta Maggiore side by side, but through different arches of the aqueduct, and immediately diverge. The Baker's tomb is built between them, close to the gate. Frontinus also calls this gate Porta Esquilina, which was natural in speaking of the Aqueducts, which entered Rome at that gate, passing immediately through the Exquiliæ, the great burial-place in the time of the Republic. Persons entering by this gate would also go direct through the Porta Esquilina of the inner line to the Esquiline Hill. We still see the three conduits called *specus* of the Marcia, Tepula, and Julia, carried on one arcade, one arch of which remains on the inside of

the wall, and the section of the three *specus* is very distinct, carried upon the stone pier of this arch, which is incorporated in the wall, with remains of the Aqua Claudia passing over it at a right angle. The Marcia passes under some high ground along the bank on which the wall stands. Part of this was visible in 1871 in the excavations made near the Minerva Medica. After passing under some higher ground, half way between the two gates it again emerges, and is carried on another stone arcade of the same character to the Porta S. Lorenzo, called by Frontinus the Porta Viminalis, because persons entering by that gate passed immediately through the valley of the Viminal to the Porta Viminalis in the inner line upon the Viminal Hill, which was destroyed in making the railway station. This was the gate in the middle of the great *agger* of Servius Tullius, and the three aqueducts of the Marcian arcade probably passed over that gate. Two *cippi* with inscriptions upon them, recording that the three aqueducts passed there, were found in the excavations in 1870. These *cippi* were placed one on either side of the *specus* of an aqueduct; the upper one of the three was then also thrown open by removing the vault.

At the present time, all the gates on the north side of the Leonine City are in pairs, one in the inner wall, the other in the outer one, and both are called by the same name. This is only a continuation of the old custom of Rome.

THE PORTA AURELIA, AND HADRIANUM, (p. 98).

THE Porta Aurelia was at the entrance into Rome of the Via Aurelia, this then passed through the Hadrianum, which was a fortress to protect that bend of the river, which would otherwise have been a weak point, as the river there is fordable when the water is low, as it is at some seasons of the year. The mausoleum of Hadrian appears to have been always intended to have formed the keep of a fortress, as there is a winding passage for horses or mules up to the top, made in the thickness of the wall when it was built, which could not have been required for a tomb only. The mausoleum was surrounded by an outer wall with towers in it, and the whole fortress was called the Hadrianum; it served as a *tête du pont* for the bridges. When the Pons Ælius was built, which was at the same time as the tomb, it is probable that it became the Pons Triumphalis; or there may have been two bridges, one at each end of the fortress, with the walls carried upon them across the

river, and meeting in one gate on the south side. There are remains of the bridge at the bend of the river, opposite to the modern hospital of S. Spirito. In the same manner another fortress included the island in the river, the walls being carried across the bridges. The name of gate of S. Peter was probably given both to the gate from the Hadrianum to S. Peter's Church in the Vatican, with a porticus or covered way from one to the other, and to the entrance to the Hadrianum on the other side of the river. In all the gates of the Leonine City the same name appears to have been given both to the inner and the outer gates. But all these arrangements belong to a later period than the time of Pliny.

Such a gatehouse or gateway-fortress as still remains perfect at the Porta Ostiensis of the time of Claudius, restored by Theodoric, would require nearly all the space between the two bridges. The remains of an early gate at Pæstum shew two roads forking off immediately outside the gate, and each passing upon a bridge over the Euripus at a short distance from it. The Porta Flumentalis in Rome was probably on the same plan. The branch of the Via Aurelia which passed through the Hadrianum fortress was also called Via Cornelia, and the gate was called Porta Aurelia.

PORTA FLAMINIA, (p. 101). TOMB OF NERO.

A CURIOUS account of the foundation of the church of S. Maria del Popolo at this gate is given in the work of Jacobus de Albericis, Prior of the small Cluniac monastery attached to itⁿ. From this it is clear that Paschal II. built this church to allay the superstitious fears of the people, on the site of what was then believed to have been the burying-place of Nero, under a walnut-tree,—

“of which a crowd of devils and a number of infernal spirits had charge, (a terrible thing to hear of). These malignant and ferocious spirits infested the gate and tormented all who passed that way. Wherefore the most holy Pope Pascal, commending himself to the special protection of the most blessed Virgin, and ordering a public and general fast of three days to all his people . . . adding fasting to prayer. . . . On the third night of his fasting and praying, the most blessed Virgin Mary, Mother of God, . . . appeared to him in a dream, and spoke to him in the most benignant manner, saying, ‘O Pascal ! O Pascal ! let your mind be cheerful and joyful, your abstinence and your prayers have been pleasing to God. . . . Wherefore do not doubt or hesitate, but go to the Flaminian gate, purge and irrigate (with holy water) around it, where you will find a certain

ⁿ “Historiarum Sanctissimæ et Gloriosissimæ Virginis Deiparæ de Populo Almæ Urbis Compendium Aucto R.

P. F. Jacobo de Albericis a. Sarnico Bergonensi Sacræ Theo. Lectore, et hujus Cœnobii Priore.” Romæ, M D XCIX.

walnut-tree, higher and spreading much further than any other tree. Upon it all our common enemies dwell and assemble ; . . . cause it to fall without delay, and tear out the roots of it, under which you will find the body of the miserable and always cursed Nero, which you will immediately cause to be removed and thrown into the Tiber, and on the same site you will cause a church to be erected and consecrated in my name.' . . . Accordingly on a subsequent day, in a general Council of the Cardinals, Clergy, and people of Rome, which was called for the purpose, he went to the Porta Flaminia with great pomp, and approached the walnut-tree, and there abjured and commanded the infernal spirits to retire ; and then taking a saw in his hand with courage and intrepidity, began to cut down the walnut-tree ; and while he was sawing (a dreadful thing !) the demons descended with great clamour and noises like the roaring of lions, the howling of wolves, the barking of dogs and other wild animals. . . . Nothing daunted the valiant Pope completed the ceremony, and the Roman people were freed on that happy day from their tormentors. The body of the wicked Nero was found there, and cast into the Tiber. The most holy Father then with his own hands laid the foundations of the high altar, which he ordered to be speedily completed, and called it by the name of S. Maria del Popolo, which it still retains ; . . . he consecrated the high altar, which still exists, on the spot where the walnut-tree had stood."

It is probable that this walnut-tree was on the summit of a lofty conical tumulus or mound similar to that of Augustus, but without the marble chambers at the base. Under the circumstances in which the body of Nero was buried, there is no probability of any great building being erected, and yet it was visible from the Campus Martius ; it was therefore probably placed on the slope of the Pincian, in the garden of the Domitii, and the space was levelled when the church was built, the present high altar marking the exact spot where the body was found that was traditionally called the body of Nero.

The cliff in this part has evidently been scarped, and a wall built up against it. There is a straight joint in the wall at the angle where it joins to the cliff of the Pincian, which seems to indicate the exact site of the gate. That part of the wall is medieval, but not all built at the same time, and thus the vertical joint remains. From the circumstance mentioned by Procopius, that this gate was high and inaccessible, it seems to have been on the upper side of the tumulus between that and the hill, and therefore higher up on the slope. There is reason to believe that the old Via Flaminia ran close under the cliff on the eastern side of the Via del Babbuino, where a narrow lane now runs, called Via Margutta, and continued in a straight line. Within the town it would therefore have run along the line of the Via dei Due Macelli, then under the foot of the Spanish steps, and at the back or under the modern houses on that side of the Piazza di Spagna, then keeping to the east of the Via del Babbuino still in

a straight line, it would pass at the foot of the zigzag road up to the present promenade on the Pincian, and so through the gate of the town, and in front of the gate of the Borghese gardens; then, dividing outside the gate into three branches, one to the right, close under the line of the present wall in the outer trench or foss of the Pincian; the middle one would be the Via Salaria Vetus, a part of the pavement of which may be seen going up the hill in a slope at the entrance to the villa of the Domitii (now the villa of Mr. Esmeade), and joining after a short distance the present Via Salaria Vetus, where some of the catacombs are situated; the other branch, or more properly the straight road, would be the Via Flaminia, going at first close under the cliff of the hill on which one of the camps of the Goths was placed, and then forming the present road to the Milvian Bridge (Ponte Molle).

Another great tumulus, or tomb, was situated near to the Porta Flaminia, but further within it, on the site of the church of S. Maria di Miracoli, at the northern end of the Corso (which is a modern street), between that and the Via di Ripetta on the bank of the Tiber. This tomb was destroyed by Paul III. (Alexander Farnese, A.D. 1540). Of this we have an account by Flaminius Vacca, who was living at that time. He says:—

“I remember, in the time of Paul III., to have seen in the Piazza di S. Maria del Popolo, a great mass of *selci* (rubble stone-work of large stones like paving-stones) high above the ground, which the said Pope destroyed, and levelled it with the ground. On either side of the Porta del Popolo, on the exterior, are bastions recently built and faced with large square blocks of marble, which are all pierced with holes made by the Goths to steal the metal clamps, which were shaped like a dovetail. The same thing was done to many other ancient buildings, especially the Colosseum. I have observed also that these holes were made on each side of the joints, in order to take out the iron clamps. It must have been so in this instance, otherwise they could not have drawn out these dovetail clamps, and these bastions have never been attacked. It is therefore evident that these blocks were taken from some other edifice; and Sixtus IV. (della Rovere, A.D. 1471—1484), who was a great builder, rebuilt (and enlarged) the church of S. Maria del Popolo; and in order that his memory should be more lasting, as the church was liable to be attacked, and might have been destroyed by some accident of war, he caused these strong bastions to be built of great masses of stone or marble, and these could only have been taken from some great Mausoleum, but possibly it may have belonged to the family of the Domitii. Such we see placed at the gates of cities, as at the gate of S. Peter at Perugia °.”

Had this author been living in our day, he would certainly have cited the example at Pompeii also, and the other instances in Rome recently excavated, as the Baker's tomb at the Porta Maggiore, ex-

° Flaminius Vacca, *Memorie*, 113, ap. Fea (C).

cavated in 1833 ; others at the Porta Nomentana ; at the Porta Lateralensis, excavated in 1870 ; and three at the Porta Salaria, excavated in 1871. The statement of Vacca, that these holes were made by the Goths to steal the metal, is evidently his own conjecture only. It is more probable that the metal used was iron, and that rust caused the iron to swell and split the stone and fall out, as rust caused by moisture makes iron swell with irresistible force ; and many of these holes were in such inaccessible places that it would not have paid for the labour to steal them. We saw such clamps in the middle of the wall of Servius Tullius, still perfect in those parts where the iron could not fall out, and where the weight of the great masses of stone could resist any force of expansion, where also little moisture could have access to it, to make it rust. On the exterior, where it was exposed to the weather, the iron clamps had rusted and fallen out centuries ago ; and the same thing has happened at the Colosseum, where the same fashion of construction had been followed. These observations apply to many of the other gates of Rome, and to other buildings. The tomb destroyed by Paul III. is generally considered to have been the tomb of Sylla, which is mentioned by Plutarch^p as being in the Campus Martius ; but Lucan^q, who also mentions this, says in the middle of it, which agrees better with the site now occupied by Monte Citorio ; this is known to be an artificial hill, and probably some great mausoleum. Agrippa is also stated by Dion Cassius^r to have been buried in the Campus Martius. If this great tomb was faced with *marble*, as F. Vacca says, it could not have been of the time of Sylla, as marble was not then introduced in Rome. Strabo mentions that the Campus Martius was full of the tombs of the great men and women of ancient Rome, but as the modern City of Sixtus V. was built in the Campus Martius, the old tombs only served for building materials. Appian says that Sylla was buried in the Campus Martius, where it was customary to bury kings. Suetonius says that the *rogus* or funeral pyre of Julius Cæsar was erected near the tumulus of Julia in the Campus Martius. This may have been the one that F. Vacca saw destroyed, being also near that of Augustus.

^p Plutarch, in the Life of Sylla, at the end.

^q “Hisne, Salus rerum, Felix his Sylla vocari

His meruit tumulum medio sibi tollere campo ?”

(Lucan, Pharsalia, lib. ii. v. 221.)

^r But this was in the mausoleum of Augustus. “After pronouncing the funeral oration (Augustus) buried the (ashes of the) body in *his own tomb* in the Campus Martius.” (Dion Cassius, lib. liv. c. 18.)

PORTA APPIA, p. 146.

IN that part of the corridor for the sentinels' path in the interior of the wall of Aurelian which is perfect, on the western side of the Porta Appia or di S. Sebastiano, a chapel appears to have been made for the use of the soldiers at the time that the walls and gates were repaired by Theodoric, the great king of the Ostro-Goths, about the year 520, as directed in his letters to the officials at Rome, published by Cassiodorus. This chapel was in the third tower from that gate, and in the lofty corridor, over the heads of the persons who pass along it, is a very remarkable fresco picture of that period, representing the Madonna with the infant Christ. This is believed to be the earliest Madonna that is known as distinct from the offering of the Magi. All those in the Catacombs are only a part of that genuine Scripture subject, even if any of them are earlier than this, which is doubtful. No figures of saints or martyrs, and no Madonna as an object of worship, occurs there before the time of John I., who was Bishop or Pope from 523 to 526, and who is recorded to have made one cemetery (now called catacomb), and to have restored two others. We find the same paintings in all these, and therefore may fairly conclude that they are all of his time, or about the same time as this one in the corridor of Aurelian^s. The corridor is perfect for a long distance in this part, reaching from the gate to the bastion of San Gallo, where it has of course been destroyed. It is perfect also on the other side of the Porta Appia, nearly all the way to the Porta Latina, and is a very remarkable remnant of ancient art and ancient history, but not being understood it is rarely visited. The *valets de place* know nothing about it, and care nothing about it. Murray does not mention it, and the strangers never hear of it. Mr. Burn, in his very learned historical work on the Topography of Ancient Rome, which is the latest and the best work of its class, and therefore the one that I refer to in preference, does not even mention this magnificent corridor, and does not appear to know of its existence, as it settles at once the extent of the Wall of Aurelian, which Mr. Burn considers as doubtful. There are remains of this corridor in all parts, although perfect only in some parts, still there is enough to

^s This ancient painting was discovered by a mere accident by the author of this work in the winter season 1869-70, and was shewn immediately to the Marquis of Bute, and several other

friends and members of the Archæological Society of Rome. It is not mentioned by any author, but there it stands, and photographs of it were taken immediately.

follow the interior of the Wall of Aurelian without the shadow of a doubt on all sides, even in the Trastevere, where it goes up to, and round the Janiculum, from opposite the Emporium, and below the remains of the wooden bridge on the south, to the Pons Janiculensis (now called Ponte Sisto) on the north. In both cases it is just far enough beyond the bridges to have protected them, and remains of the four towers that projected into the Tiber can be seen when the water is low.

THE VATICAN, p. 159.

THE excellent "Handbook of Central Italy," by Octavian Blewitt (published by John Murray in 1850), is so extremely useful and valuable for some objects, that I have had occasion to make extracts from it more than once. This is the more allowable, because the passages that we want have generally been omitted in the late editions of the "Handbook of Rome," edited by Mr. Pentland for Mr. Murray.

"There is no palace in the world which approaches the Vatican in interest, whether we regard its prominent position in the history of the Church, or the influence exercised by its museums on the learning and taste of Christendom for nearly three hundred years. It is an immense pile of buildings, irregular in their plan, and composed of parts constructed at different times, without a due regard to the general harmony of the whole. There seems to have been a palace attached to the basilica of S. Peter's from a very early period, probably as early as the time of Constantine. It is quite clear that the palace was in existence in the eighth century, for Charlemagne resided in it at his coronation by Leo III. In the twelfth century this palace had become so dilapidated from age, that it was rebuilt by Innocent III., who entertained Peter II., king of Aragon, in the new edifice. In the following century it was enlarged by Nicholas III., whose additions occupied the site of the present Tor di Borgia. The Popes for upwards of a thousand years had inhabited the Lateran Palace, and did not make the Vatican their permanent residence until after their return from Avignon, in 1377. Gregory XI. then adopted it as the papal palace, chiefly on account of the greater security given to it by the vicinity of the Castle of S. Angelo. John XXIII. (A.D. 1415), in order to increase this security, built the covered gallery which communicated between the palace and the castle from his time to May, 1849, when the Republican Government partially destroyed it, and constructed barricades with its materials. From the reign of John XXIII. the Popes seem to have vied with each other in the extent and variety of their additions. Nicholas V., in 1450, conceived the idea of making it the largest and most beautiful palace of the Christian world, but he died before he could accomplish his design, and was only able to renew a portion of the old palace. Alexander VI. completed this building nearly as we now see it. The chapel of S. Lorenzo, the private chapel of Nicholas V., well known from the frescoes of Beato Angelico de Fiesole, is considered to be the only part of the edifice which is older than his time. The buildings of Alexander VI. were

distinguished from the later works by the name of the Old Palace, and are now called, from their founder, the Tor di Borgia. To this structure Sixtus IV., in 1474, added the Sistine Chapel, from the designs of Baccio Pintelli. About 1490 Innocent VIII. erected at a short distance from the palace the villa called the Belvedere, from the designs of Antonio Pollajuolo. Julius II. conceived the idea of uniting the villa to the palace, and employed Bramante to execute the plan. Under his direction, the celebrated Loggie were added, and the large rectangular space between the palace and the villa was divided by a terrace separating the garden of the villa from the lower courts of the palace, which he intended to convert into an amphitheatre for bull-fights and public games. In the gardens of the Belvedere, Julius laid the foundations of the Vatican Museum. This honour has been often attributed to Leo X. ; but Cabrera, in his very curious Spanish work on the Antiquities, published at Rome in 1600, enumerated the Laocoon, the Apollo, the Cleopatra, and other statues placed there by Julius II. After his death, Leo X. completed the Loggie, under the direction of Raphael. Paul III. built the Sala Regia and the Capella Paolina from the designs of Antonio Sangallo ; and Sixtus V. completed the design of Bramante, but destroyed the unity of the plan by constructing across the rectangle the line of buildings now occupied by the library. When Cabrera wrote his description, Sixtus V. had begun a new and more imposing palace on the eastern side of the court of the Loggie, and it was then advancing towards completion under Clement VIII. This is now the ordinary residence of the Popes, and is by far the most conspicuous portion of the mass of buildings which constitute the Vatican Palace. Numerous alterations and additions were made by succeeding pontiffs. Under Urban VIII. Bernini constructed his celebrated staircase, called the Scala Regia ; Clement XIV. and Pius VI. built a new range of apartments for the Museo Pio-Clementino ; and Pius VII. added the Braccio Nuovo, a new wing covering part of the terrace of Bramante, and running parallel to the library. Leo XII. began a series of chambers for the gallery of pictures, which were finished and appropriated to their original purpose by Gregory XVI. It can hardly be expected that an edifice whose development may thus be traced for upwards of four centuries, should have preserved any uniformity of plan ; and hence the general effect of the palace is far from pleasing, although many of its proportions and details are of considerable merit. It is rather a collection of separate buildings than one regular structure. The space it occupies is immense : its length is said to be 1,151 English feet, and its breadth 767 feet. It is a common saying that the palace, with its gardens, covers a space as large as [the city of] Turin. The number of its halls, chambers, galleries, &c., almost exceeds belief ; it has 8 grand staircases, 200 smaller staircases, 20 courts, and 4,422 apartments^t."

^t Octavian Blewitt, "Handbook for Central Italy," p. 442. London, John Murray, 1850. 12mo.

APPENDIX
TO CHAP. I.-ON PRIMITIVE FORTIFICATIONS,
AND CHAP. II. WALLS AND GATES.

ANCIENT STREETS AND ROADS.

THE streets of Rome were originally made in the trenches of the Primitive Fortifications. Remains of them are found all over Rome, and the account of the fortifications would not be complete without including the streets. The roads in the immediate neighbourhood are also closely connected with them, and were sometimes part of them.

The ancient streets of Rome itself are obviously the first thing to be studied, and then the roads leading from it and to it. The roads, the aqueducts, and the drains (*cloacæ*) of Rome were considered by Strabo and others among the wonders of the world, and their remains shew that this was no exaggeration. We find these remains both within the precincts of THE CITY, that is, within the line of the Wall of Servius Tullius, and in the suburbs between that inner wall of the City and the outer enclosure on which the Wall of Aurelian was afterwards built^u.

The great earthworks of man from the earliest ages, before writing was invented, remain before our eyes, and tell their story to those who can understand them. In Rome, it is evident that each of the hills was originally a separate fortified village, before they were combined into one city by the later Kings, Servius Tullius, and the Tarquins, according to the history of Livy, which is confirmed in a very remarkable manner by the existing remains. There is scarcely a building that he mentions of which some remains cannot be found by experienced eyes which know what sort of building to look for. This combination of the separate hill-fortresses into one city was made by erecting short *aggeres* or banks of earth across the valleys or great *fossæ* of the older fortresses. Some of these were natural valleys, others were made by the hand of man, cutting off a promontory from the adjacent hill. On the eastern

^u These remains, being unquestionably work of the ancient Romans, are useful guides for distinguishing their roads in Britain, in Gaul, in Germany, in the other parts of Italy, and in the East. Wherever the Roman dominions

extended they made good roads. In Spain, in Asia, and in Africa are found remains of the roads of the ancient Romans, often still in use, and the best roads in those countries.

side, where the land is high, and there could be no scarped cliffs of the old fortresses, a great *agger* or bank was made by Servius Tullius, and another by Tarquinius Superbus further to the east, to make a double line of defence, as was usual in all primitive fortifications or fortified towns.

Let us now consider the number of *fossæ*, or trenches or castle ditches there must have been in Rome at the beginning of the Republic, and remember that in each of these castle ditches (when dry) there would be a road as a matter of course, according to the almost universal practice of that age.

First, there must have been one round each of the separate hill-fortresses ; secondly, there must have been one on both sides of each of the *aggeres* or banks, the trenches out of which the earth was thrown to form the bank. Each of these foss-ways, or roads in the trenches, became streets in the time of the Republic and of the Empire, by building houses against the bank, often cutting away part of the bank to admit the back part of the house. This was distinctly shewn in the excavations made in 1870 by four of the young Roman princes, near the railway station. The houses on one side of a street of the first century of the Christian era were brought to light, built into the bank ; and the railway runs for a short distance on the site of the roadway, about twenty feet above its level, because the old inner foss has been filled up to the usual level of the ground. There was a similar street on the outside of the bank, of which remains of the painting of one house also were visible. Unfortunately these excavations were not carried on far enough to shew the width and the depth of the great outer foss of the city in this part. Strabo tells us that it was *in its smallest part* a hundred feet wide and thirty feet deep, and it may have been more in this part. We have no written record of any details of the work of that period. Livy and Dionysius merely record the traditions, that *aggeres* were made by Servius Tullius and the two Tarquins, and the enormous amount of work which the Roman people were called upon by their rulers to execute, caused the great Rebellion which ended in the Republic. The streets within the city wall were also made in the old foss-ways about twenty feet below the ordinary surface of the ground, as we see by the old pavements continually being dug up at that depth in all parts of Rome, and which were distinctly visible in the excavations made in 1870 at the Porta Capena and the Via Appia. In this pit two pavements were visible at different levels, one about ten feet above the other. The same thing is now visible in the pit in the garden of the Villa Volkonski,

although there the difference of level between the two pavements is not so great. There is good reason to believe that the pavement at the higher level was made in the second century of the Christian era, when it is recorded that new streets were made in Rome. That the old streets at that great depth were not intended for carriages is evident. They were usually about three yards wide only, and in many places there were steps up the banks from them. To each of the hills also there was a zigzag road, like that now in daily use up to the Pincian. These have been altered into straight streets with a steep slope at various periods ; some of them only in the sixteenth century, under Sixtus V., who made many new streets in Rome, especially the principal street, called the Corso, or race-course, because the races of horses without riders are held there in the Carnival, and the long straight street from S. Maria Maggiore to the Pincian, called by different names, recording the name and titles of the Pope Felice Peretti, who had the title of Sixtus Quintus,—Via Felice, Via Sistina, and Via delle Quattro Fontane, from the four fountains at the angles of the old gate on the Quirinal. This straight street, replacing the old zigzag road from the Piazza Barberini to the Quirinal, necessarily left great spaces at the sides to be filled up, as would be the case if a new street were now to be made from the summit of the Pincian, across the Piazza del Popolo, to the further side to join the Via di Ripetta. This is exactly what was done by Sixtus V. in the former case, consequently when the Scotch College was rebuilt in 1866, the builders could find no solid foundations for it until they reached the depth of forty feet, and then, to their great surprise, they came to the pavement of an old street, which made ignorant people say how enormously the whole soil of Rome has been raised, whereas it was only the change of a zigzag for a straight street which had caused this enormous depth near the summit of the hill. If a line was now drawn from the top of the Pincian to the level of the Piazza del Popolo, the depth would be equally great.

In consequence of these old deep hollow ways being so inconvenient for carriages, and the authorities in the time of the Republic not being willing to incur the expense and the annoyance of making new streets in an old city, they endeavoured to avoid these by issuing edict after edict against the use of carriages in the streets of Rome, by which means they succeeded in staving off the necessity until about the middle of the second century of the Christian era, when these edicts cease ; and new streets were made in Rome. Previous to this time the only information we have from records

is from those edicts, and from some incidental notices that the ladies were accustomed to ride on horseback, or to be carried on litters to the gates of Rome, where their carriages were waiting ^x.

The earliest distinct notice about the streets in the city besides these edicts, is believed to be when Augustus placed the gilt column called *Milliarium Aureum* in the *Forum Romanum*, which he intended to be the central point from which all the roads should be measured throughout Italy^y, and perhaps throughout the Roman empire. There is reason to believe that this plan was never carried out; the roads continued to be measured from the Gates of *the City*, and sometimes from the outer gates, as they had been before.

STREETS IN THE CITY.

From the site of the *Milliarium Aureum* the remains of an ancient paved road or street may be seen ascending the Capitol^z, with its polygonal blocks of basaltic lava, which is so hard as to be almost imperishable, and no traffic has any effect upon it. This hard paved road passes between two masses of tufa, which formed the jambs of a double gate to the Capitol or *Arx*; this street is here divided into two parts going in different directions, the right-hand branch, which is seven yards and a half wide, passed between the column of *Phocas* and the *Chalcidicum* or porch of the *Curia*, and the building called the *Basilica Julia*; but it touches the base of the temple with the celebrated three columns. This street bifurcated, going on the right to the *Forum Boarium* and the *Circus Maximus*; where it may be seen passing under the Arch of *Janus Quadrifrons*, and behind the lower gallery of the *Circus Maximus* it is also now visible under the church of *S. Anastasia*.

This low branch was the *Infima Nova Via*. The pavement of the left-hand branch is now again visible; it divided also, one branch ascending to the right, behind the church of *Santa Maria Liberatrice*, up a steep incline to the *Palatine*, where the pavement remains well preserved under the Portico of the Imperial Palace of *Tiberius*, in the *Clivus Victoriæ*. This was connected with two

^x At the present time the custom is reversed, like many of the old Roman customs: the ladies now ride in carriages to the gates, where their horses are waiting for them to mount.

^y *Dion.*, lib. liv. c. 8.

^z In the *Bulletin de Correspondance Archeologique*, 1870, p. 48, it is stated

that in 1865 the pavement of an ancient street had been found at the foot of the Capitol, in the *Via dell' Ara-Cœli*, under the house No. 43, at the depth of 28 ft. This must be another instance of the change of a zigzag road to a *clivus*, or steep incline.

other branches, excavated by the emperor Napoleon III., and continued as far as the street of S. Bonaventura, and is visible again in the upper story of the palace, near the series of bath-chambers.

Another street started also from the gate of the Capitol or Arx, towards the left or south-east, passed under the arch of Septimius Severus, where the pavement is visible, then in front of the temple of Antoninus and Faustina at the same level as under the arch; the bases of the columns of that temple are excavated and left visible, these stand at the top of a flight of steps, which led down into the road or street; this must therefore have been twenty feet below the present level, it then passes in front of the church of SS. Cosmas and Damian. This church is recorded in the Pontifical Registers^a to have been made in three Fora in the sixth century, and in the Via Sacra near the Temple of the City of Rome. Signor De Rossi^b has proved, by a drawing of the fifteenth century found in the Vatican Library, that the round temple which now forms the vestibule of this church was the temple of Romulus the son of Maxentius, by the inscription on the cornice, which is visible on the drawing.

This street then has a branch from it to the east, passing on the south side of those three temples, and the doorway of the temple of Rome of the time of Hadrian still exists; it opened into this street^c. The main street, called the Via Sacra, goes up the slope or Clivus Sacer to the Summa Via Sacra, or the level of the platform on which stands the church of S. Francesca Romana; after passing the Basilica of Constantine, it goes to the left on the east side of the great platform on which there are the remains of a double colonnade of the time of Augustus, and passes under the Velia, an ancient earthwork, against which are the remains of a porticus or arcade of Nero, intended for part of his gigantic Golden House. This earthwork is separated from the Esquiline Hill by a great wide and deep foss, with the road in it as usual, now called the Via del Colosseo. Trees growing on the banks, appearing on the tops of the walls, may be seen on both sides of this road or street. The earthwork between these two ancient roads is probably the Velia, the eastern outwork

^a "Hic (Felix) fecit Basilicam Sanctorum Cosmæ et Damiani in Urbe Roma in loco qui appellatur Via Sacra juxta templum urbis Romæ." (Anastasius, in Vita S. Felicis IV.)

^b See Bullettino di Archeologia Cristiana, 1868.

^c The British Archæological Society excavated the ground in front of this doorway in December, 1868, and found

the pavement of the cross-street at the foot of the door of the temple; but the proportions of the doorway shewed that they had not gone deep enough, and had not arrived at the original pavement, but at the second one, made when the streets were made in Rome in the second century. They were obliged to fill up the pit again immediately, without going any lower.

or wing of the Palatine in the time of the primitive fortifications. The Velabrum or western wing, at the opposite corner, kept open the communication between the early City and the Tiber.

To return to the other branch of the road called Via Nova, which we left near the temple with the celebrated three columns, it passes under the arch of Titus, it then descended to the level of the great foss-way between the Palatine and the Coelian, and passed on to the Circus Maximus on the right, and the Porta Capena on the left. The *clivus* or sloping road from the arch of Titus to the Colosseum is the continuation of the Summa Nova Via.

The Ædes deorum Penatium, or Larium, stood on the Velia or Summa Via Sacra, or the highest part of the Via Sacra, according to Solinus^d and Varro^e, and must therefore have been on the site of the building miscalled the Temple of Venus and Rome; it was rebuilt by Hadrian and Diocletian^f, whose brick-stamps remain in the walls of that building.

Returning to the Fora, which were at the same low level as the streets, both having been made in the great ancient *fossæ* or trenches of the primitive fortifications. The head of an arch, and the upper part only of two columns in the Forum Transitorium under the figure of Pallas, shew that the pavement of that forum was many feet below the present level; the same is shewn in the Forum of Augustus at the gate called Dei Pantani, and in the Forum of Trajan by the excavations there. To make sufficient space for this great forum, the rock of the Quirinal was cut away on the eastern side of the old foss between the Palatine and the Quirinal, which was made more than double its original width; the rock was there as high as the top of the column, as is recorded on an inscription at the foot of it. The shops on the east side of this great forum, which still exist behind the modern houses, are built against the scarped cliff; and the summit of the cliff, on which stands the Torre delle Milizie, is of about the same height as the top of the column without the image placed upon it.

The surest indications of an old street are the polygonal blocks of hard lava (called *selci*); wherever they are found in any considerable number it is almost certain that an ancient street passed near that spot. Some of these may be seen in the vineyard of Prince

^d "Tullus Hostilius (habitavit) in Velia ubi postea deum Penatum ædes facta est." (Solinus Collectanea, i. 21.)

^e "Veliense sexticeps in Velia apud ædem deum Penatium." (T. Varro de Ling. Lat., lib. v. c. 8, p. 60.)

^f Nibby was present at the excavation made in 1829, when the brick-stamps of Hadrian were found in the walls of the foundation, and in the upper part those of Diocletian. (Roma Antica, vol. ii. pp. 725, 738.)

Torlonia, near S. Prisca on the Aventine, on the line of the Wall of the Kings in that part, and shew that a street passed along inside of it as usual. Others were seen at a great depth in the excavations near the railway station in 1868, again marking the line of a foss-way or street within the *agger* of Servius Tullius, as we have said^g. In the Trastevere also these stones were found in 1860 by Guidi, in a pavement thirty feet below the present level of the soil, near the palace of the Anicii; and in January, 1868, a similar pavement was found at the same depth by Signor Ricci, in his garden behind the house at No. 5, Via dell' Arco de' Tolomei. These indicate the line of one of the hollow ways leading from the City to the Janiculum, at the time that it was a separate fortress connected with the City by these hollow ways or foss-ways only.

The principal old pavements found within the limits of the City, that is within the line of the Wall of Servius Tullius, have, we believe, never before been mentioned. But the fragments of the Marble Plan of Rome, the Catalogue of the Regionaries, and the passage in Pliny respecting the gates, shew how numerous the old streets were.

ROADS OUTSIDE OF THE WALL OF SERVIUS TULLIUS, OR IN THE SUBURBS.

We have now to mention the roads made outside of the Wall of Servius Tullius. To describe all the roads leading from the gates of Rome, and the buildings on the banks by the side of them, would require a bulky volume. We can only give a slight indication of what might be done on this subject, and we must be content with a concise notice of the principal roads closely adjoining to the City^h.

^g Other notices of pavements of streets found at this depth are given. Crescimbeni (*Stato della Basilica di Santa Maria in Cosmedin*, Roma, 1719), at pp. 24 and 25, says that in the year 1715 two ancient streets, with polygonal blocks of lava, were discovered, one under the other, in the Piazza di Santa Maria in Cosmedin; and at p. 34 he says that the continuation of the ancient or lower road was discovered in the year 1719 near the Salaria, in the foundations of the palace of the Marquis Gabrielli, 32 palms (or 24 ft.) under the modern ground.

Near the entrance to the edifice called Terme di Tito, or House of Nero, an ancient road is also visible.

Ficoroni (*Bolla d'oro*, p. 31), says, that in the year 1730 a pavement of an ancient road, 10 palms (7½ ft.) under the ground, was discovered in the Villa

Strozzi, near the Thermæ of Diocletian. In the year 1868, Baron Visconti also discovered an ancient road in front of the Excubitorium of the Vigili in the Trastevere, at about the same depth.

^h Within the Wall of Aurelian, but outside of the enclosure of Servius Tullius, Flaminius Vacca mentions, in No. 16 of his *Memorie*, that on the left side of the street which goes from the Trofei di Mario to the Porta Maggiore, an ancient road was discovered, with many statues in marble and figures in bronze of the Emperors; and in No. 29, he says that another ancient road was discovered in the Piazza di San Luigi de' Francesci, with three or four columns. Between the year 1868 and 1869 Dr. F. Gori has seen, in the excavations made for the gas-pipes, the pavement of ancient roads near the Arco de' Pantani in the Via della Pilotta, corresponding to

From the Porta Trigemina, which was situated near the modern arch of the Salaria which crosses the road between the Aventine and the Tiber, began the VIA OSTIENSIS; it was at a lower level than the present road, and passed by the Pyramid of Caius Cestius, where the pavement can still be seen in the hollow left at the base. This pyramidal tomb was on the left side of the road, which did not pass through the Porta Ostiensis, because that was not made until afterwards. There was no *pomœrium* (*post murum*) to the Aventine until the time of Claudius, consequently there was no outer wall and no gate in the part between the fortifications, on the site now occupied by S. Sabba and the Tiber. The road went direct to Ostia, one of the earliest Roman colonies, having been founded by King Ancus Martius. It also passed by the Navalìa and the Emporium, and continued near the bank of the Tiber to the church of S. Paul along the present road. At the ancient Ponticello near S. Paul's, the Via Ostiensis passes over the small stream called Grotta Perfetta, and here the Via Laurentina is united with it. This road went out of Rome through the same gate-house, in which there are two gates through the inner wall, and this road, which started from the Porta Nævìa(?), or the Porta Raudusculana(?), passed the Porta S. Paolo, and the ancient bridge of tufa over the small stream called Acquattaccio, one branch of the river Almo, and at Ponte Fratto it turned to the left to go straight to Laurentum. The Via Ostiensis, near the tenement called Malafede, has an ancient bridge of tufa in large masses; of this there are eleven arches to allow for floods, unfortunately they are now all buried, but the ancient pavement can be seen there.

Sante Bartoli published engravings of a fine tomb on the Via Ostiensis, at three miles from Rome, now destroyed. It was square and faced with marble, and was erected to the Prætor Marcus Antonius Antius Lupus, who was put to death by the Emperor Commodus, A.D. 190, on false pretexts, as we are told by Lampridiusⁱ. The inscription is given by Gruter^j.

the Vicus Corneliorum; near the tomb of Bibulus; and in the Via del Banco di S. Spirito, near the church of S. Celso, where the base of the arch of the Emperors Gratianus, Valentinianus, and Theodosius was also discovered; in the Via della Dateria, near the tomb of the family of Sempronius, there is also the pavement of an ancient road.

ⁱ Lampridius in Commodus, c. 7.

^j "In Via Ostiensi III. ab Urbe milliari in sepulcro marmoreo quadrato,

fascibus et securibus consularibus atque aliis ornamentis insigni :

D . M

M . ANTONII . ANTII . LVPI . PR
PATRICII . AVGVRIS . QVAEST . SODAL .
TITII . TRIB

MIL . LEG . II . ADIVTR . PIAE . FIDEL .

X . VIR . STL . IVD . PRAEF . FER

LAT . CVIVS . MEMORIA . PER . VIM .

OPPRESSI . IN

INTEGRVM . SECVNDVM . AMPLISSIMI .
ORDINIS

The VIA LAURENTINA can be traced over two bridges faced with brick, over the streams of Cornacchiola and Petroso; the pavement of large stones can again be seen on the summit of Pinzarone. At the tenth mile from the present gate, in the tenement of Decimo, the eleventh milliarium or milestone of the Emperor Maxentius still exists *in situ*^k. Near Decimo, in the tenement of Porcigliano, Nibby discovered an inscription of another tomb of the family Cestia; and also near Decimo, Sir William Gell ("Topography of Troy and its Vicinity") observed the round tumulus or tomb of the King Dercennius described by Virgil^l.

By the side of the Via Laurentina issued the Via Ardeatina, near S. Balbina, passing almost close to the great circular tomb or mausoleum, faced in the interior with *Opus Reticulatum* of the time of Sylla, engraved by Sante Bartoli^m.

The VIA ARDEATINA passed through the outer enclosure or *mænia* of Rome at the Porta Ardeatina, which was incorporated in the lofty Wall of Aurelian when that was raised upon the old line; but the doorway itself is of the time of Nero, and is as fine a piece of brickwork as any in Rome, or in the world.

This road joined the Via Appia, and passed over the small stream that falls into the Tiber near S. Paul's, called Acquataccio, a branch of the Almo (called by Festus Retrices), in the valley of the Caffarella. According to Festus, this road passed near the spring of this stream. A cross-road which goes from the Via Ostiensis

CONSVLTVM . RES TITVTA . EST . SE-
PVLCHRV . AB . EO . COEPTVM
CLAVDIAE . REGILLAE . VXORI . ET .
ANTIAE . MARCELLINAE . FIL
PIETATIS . SVAE . ERGA . EVM . TES-
TIFICANDAE . GRATIA . ET
NOMINIS . EIVS . IN . PERPETVVM .
CELEBRANDI . PERFECERVNT . ATFINES
M . VALERIVS . BRADVA . MAVRICVS .
PONTIF . ET . ANTONIA . VITELLIA
AMICI

Q . FABIVS . HONORATVS . T . AN-
NAEVS . PLACIDVS"

Gruter, p. 356, No. I."

To the left of the Via Ostiensis, at the sixth mile from Rome, the marble *cippus* is still in its place, with the inscription. It was discovered in 1816 with leaden pipes:

M . STLACCIVS C . F . COL
CORANVS.

PRAEF . FABRV . EQVO
PVBLICO EX QVINQVE
DECVRIIS PRAEF . COH . V
BRACAR AVGVSTANORVM

IN GERMANIA . TRIB . MIL . LEG . II
AVG PRAEF . EQVITVM . ALAE
HISPANORVM . IN BRITANNIA
DONIS MILITARIBVS DONATVS
CORONA MVRALI . HASTA PVRA
SIBI ET

C . STLACCIO . CAPITONI . PATRI
C . STLACCIO . C . F . COL . CAPITONI .
FRATRI

CLAVDIAE . SECVNDAE . VXORI
Bracar Augustanorum is the town of Bracara, now called Braga, in Portugal, called by Pliny (lib. iv. cap. 20) *Bracarum Oppidum Augustum*, and by Ptolemy *Bracara Augusta*.

^k DOMINO
NOSTRO
MAXENTIO
INVICTO
P . AVG
II . XI

^l Æn., lib. xi.

^m Antichi Sepolcri delineati et incisi da Pietro Sante Bartoli. Roma, 1697, folio, p. I, 46.

near S. Paul's, and passes the Via Ardeatina near S. Sebastian's, goes more close to these springs, or to the sources of some of them, and passes also near the catacomb of Prætextatus and the church above it, said by some to have been a temple of Bacchus, of which we have no record, and by others the tomb of Herodes Atticus, which is not probable, as there is another tomb of the first century for that family in the valley below, called Dio Redicolo. This church, whether it was originally a temple or tomb, is a very fine building of the best period, the early part of the first century. The Via Ardeatina has not been traced farther until near Ardea. But close outside of the wall of Rome it can be distinctly traced to the junction with the Via Appia, at the spot where the chapel of Domine quo Vadis(?) now stands, with the tomb of Priscilla, which has a tall round tower built upon it, on the opposite side of the road. It passes under a scarped cliff, with remains of early tombs upon it, on the edge of the valley through which this stream of water passes, used as a foss for the outer *agger*, on which the Wall of Aurelian is built. The hard polygonal paving-stones are left on the line in many places, and the foundations of the bridge can be seen by the side of a mill near the Via Appia; this road makes a considerable angle to the east at this point, to avoid the more ancient Via Ardeatina, to which the tall round tomb belongs; and there would have been no space for tombs on that side of the Via Appia if it had not turned here to the east. The engineers who made the carriage-roads at a later period, did not consider it necessary to make two so near together, and that part of the Via Ardeatina nearest to Rome was left as a bridle-road only, or entirely abandoned. Beyond this point the Via Ardeatina, after passing Domine quo Vadis(?), is a deep foss-way cut through the tufa rock, and passes between the churches of S. Sebastian and S. Paul. At this point the catacomb of SS. Nereus and Achilleus and Domitilla, the finest of all the catacombs, is situated; the brickwork at the original entrance is of the first century, and closely resembles that of Prætextatus and of the church of S. Urbano.

VIA APPIA.—The excavations made by the Archæological Society in 1868, in the garden of the monks of S. Gregory, shewed clearly the remains of the celebrated Porta Capena, so long sought for in vain.

This celebrated gate was at the commencement of the Via Appia, made by the Censor Appius Claudius in the year of Rome 442ⁿ, or 312 years before the Christian era. As this gate was one of the

ⁿ Livii Hist., lib. ix. c. 29.

gates of the City, it must have been in the Wall of Servius Tullius, and in that part of the wall which passed across the valley between the Cœlian and the Aventine. Therefore the pits that were dug along the line of the *agger* in which the wall of Servius Tullius and the aqueducts were distinctly visible, proved that this gate must have been at that point.

The Via Appia is only three yards wide at its starting-point, but this is in accordance with the Laws of the Twelve Tables, and the Porta della Marina at Pompei is of exactly the same dimensions. The more usual width of the pavement, not at a gate, was four yards, besides the raised footpaths or *Crepidines*. It is curious to observe how very careful the ancient Romans were of the convenience of foot-passengers, as we see at Pompei, and how opposite the modern Romans are to the ancient in this respect, as in every other. At places where crossings occurred, the pavements were ordered to be eight yards wide in a direct line°. At a subsequent period the level of the roads was raised about ten feet, and we found the pavement of this second road also, not immediately over the old one, but a little on one side of it. This alteration was probably made by the Emperor Domitian, who, according to the Viennese Catalogue published by Eccard, rebuilt the Porta Capena, A.D. 90. This upper pavement was supported on a bed of cement, formed of lime and broken bricks and earth well beat together. The large polygonal stones of the pavement were imbedded in this composition or cement, ten feet above the level of the old one, but not directly over it, as we have said; it passed over a portion of the Wall of Servius Tullius, and upon two arches of the three aqueducts which passed over the arch of the original gate. The pavement of the Via Appia was found by Canina with some tombs under the cliff of the Villa Mattei; a little farther to the south, it was found by Signor Guidi in the courtyard of S. Sisto Vecchio, and by Ficoroni in the botanic garden adjacent. In the vineyard called Vigna Naro, just outside of the Porta di S. Sebastiano to the right, the first milestone was found, as Fabretti and Revillas have said; the spot on which stood this milestone is exactly a Roman mile from the site of the Porta Capena, excavated by the Society, according to the scale given by Canina; the milestone itself was removed to the Capitol.

In another pit to the right, or on the western side of the modern Via di Porta S. Sebastiano, another portion of the Wall of Servius Tullius with the Aqueducts was shewn, with a number of the polygonal stones of another road, which must have passed near to the

° Pandectarum, lib. viii. tit. 3.

bank of the Almo, now the Marrana, and from thence it went in front of the porticus or arcade of the Thermæ of Caracalla, and this must have been the Via Nova made by him, as recorded in his life by Spartianus^p, placed in the Regionary Catalogue in Regio XII. Caracalla is also recorded to have made a new and handsome gate at the entrance into the City from his new road^q, of which we have no remains and no further account^r. The Via Appia went to Capua and Brindisi, as we are told by Frontinus and Strabo, and was celebrated at all times for the magnificent series of tombs with which its sides were decorated. Statius calls it the Queen of long roads^s.

The VIA LATINA diverges from the Via Appia towards the east at the church of S. Cesareo, the original pavement at the junction was found by Guidi near this point but behind the wall, in the garden of the Vigna Caffarelli; the exact site is marked by the cypress trees. A little further on, the old pavement is visible in the road near the church of S. Giovanni a Porta Latina, and the mass of a great tomb remains between the church and the gate, which has long been closed.

Outside of the gate the old road, for three miles out of Rome, is first a cart-road for the farmers, then a bridle-road only, and it appears never to have been made into a carriage-road in this part; but there are many remains of tombs of the time of the early Empire along this line, and several deep wells in a line parallel to the road on the southern side of it, descending into the *specus* of a subterranean aqueduct, most probably a branch of the Anio Vetus. This *specus* was cut through in making the railway near the bridge of the Via Latina. At three miles from Rome it crosses the Via Appia Nova in an oblique direction, and on the other side of that road are the celebrated painted tombs of the Via Latina, before mentioned, which extend to the aqueducts; it then soon becomes the modern road to Tusculum and Frascati.

The VIA APPIA NOVA leaves Rome by the Porta S. Giovanni, close to the Porta Asinaria, but on a much higher level. The part nearest to Rome is evidently modern, and is carried on a bank of earth across the great external foss, leaving the Via Asinaria (now a cart-road only) far below it, in the bottom of the great foss, which is here

^p "Idem viam novam munivit quæ est sub ejus Thermis [Antoninianis scilicet] qua pulchrius inter Romanas plateas non facile quicquam invenias." (Spartianus, Antoninus Caracalla, c. 9.)

^q Sextus Aurelius (De Cæsaribus, c. 21).

^r Possibly the Septizonium of Sep-

timius Severus was originally left unfinished by that emperor, and was completed by Caracalla about twenty years afterwards; and as this was an entrance into the Palatine, and therefore into the City, it may have been also called the Gate of Caracalla (?).

^s Statii Sylvæ, lib. ii. § 2.

chiefly natural, as the stream called the Marrana runs along it, parallel to the Wall of Rome, from the aqueducts to the Porta Metronia, in the angle where it enters Rome near the south-east corner of the Coelian Hill. Beyond this point, where the Via Asinaria and the Via Lateranensis run into the Via Appia Nova, after each passing over a bridge across the Marrana, the road, though retaining the name of Nova, is of the first century of the Christian era and of the time of Frontinus, as is shewn by the remains of tombs of that period along the sides of it. There are remains of the old hollow way between steep banks at about a mile, and from that to two miles, from Rome, part of the old Via Asinaria.

The VIA LATERANENSIS was a short road from the postern gate of the Lateran to the Via Asinaria, passing over the Marrana on a bridge which still exists, and is probably ancient, with a mill built upon it; remains of the old pavement are visible, but the bridge is concealed by modern buildings. The Via Asinaria went through the Porta Asinaria, probably straight from the house of Asinius Pollio, which we believe to have been in the garden now of Prince Massimo, near the Scala Santa, and there is a tomb of the first century in that garden, on the bank behind that chapel, towards the Via Labicana. Another ancient road passes through this garden, on the northern side of the bank on which the arcade of Nero stands^t, and also through the garden of the Villa Volkonski, as is seen by the pavement and paving-stones in this garden, and at the tomb of Claudius Vitalis, in the same line. The Via Asinaria, after passing through the Porta Asinaria, had almost immediately to pass over a bridge, on which a mill has been built; parts of the old bridge probably remain, but concealed by the mediæval and modern buildings of the mill; the old paving-stones remain in use. About two hundred yards further on is another mill on another old bridge, this was the line of the Via Lateranensis (as before mentioned), which here was united to the Via Asinaria, and the two united continued along the outer bank of the great foss or valley in which is the stream, until it arrived at the present great road to the east, the Via Appia Nova. The portion between this point of junction with the old road and the Porta S. Giovanni is modern, made at the same time as that gate, when this road was raised to a higher level.

The ancient road just mentioned as passing along the bank on

^t This was perhaps part of the original Via Labicana, the line of which now runs on the opposite side of the great foss or valley, between the Coelian and the Esquiline.

the northern side of the arcade of the aqueducts, is believed by some authorities, with great probability, to have been part of the Via Tusculana mentioned by Tibullus^u, and to have joined the present road to Frascati after passing through the Porta Maggiore, and continuing along close under the arcade of the Aqueducts as far as the Porta Furba, where it runs into the usual road to Frascati, having previously been little more than a cart-road.

The VIA LABICANA began near the Colosseum, and passing through the Porta Maggiore goes direct to Labicum (La Colonna). Near the Villa Volkonski the ancient pavement is visible, soon afterwards it passes the gate, and the tomb of Eurysaces the Baker. Ciampini states that in his time (in 1687) the milliarum or milestone of the Emperor Maxentius, of *three* miles from Rome, was found at *two* miles from the gate of Honorius, near the Tor Pignattara or mausoleum of S. Helena^v. A mile further on, at the Cento-Celle, a large round edifice will be observed, supposed by some to have been the temple of Quies, recorded by Livy in his fourth book. In this tenement Gavin Hamilton excavated the statues of Cupid and Adonis, and of Lycurgus, now in the Capitoline Museum. Here also, in 1866, Sig. Adv. P. L. Guidi made some excavations under the direction of Gori, and found two mosaic pavements with fine figures, and remains of magnificent Thermæ, in which the brick-stamps were of the time of Hadrian. This was near another tomb excavated in 1849, and described in the Annals of the Institute for July in that year as the tomb of the Aterii. It seems evident that at the Cento-Celle there was a great burial-place in the time of Hadrian, and apparently an Imperial Villa also. The great aqueduct of the time of Hadrian, called Aqua Alexandrina, leads direct to this point.

VIA PRÆNESTINA.—It is not easy to distinguish the original line of the roads to Præneste, now called Palestrina, through Gabii and Collatia, or the Via Prænestina, Gabina, and Collatina. The modern carriage-road, now called the Via Prænestina, passes by the interesting ruins of Gabii. Præneste is more than twenty miles from Rome, Gabii is eleven. The part of the road between Gabii and Rome must have been the VIA GABINA. The direct line to Præneste passes to the north of this, and must have passed through Collatia, now called Lunghezza. The cart-road now called the VIA COLLATINA, turns off

^u "Nec taceat monumenta viæ quæ
Tuscula tellus." (Tibulli, Eleg., lib. i.
Eleg. vii. l. 56.)

^v IMP . C
D . N . M . AVR

VAL . MAXEN
TIO . P . F . PER
PETVO . INVI
CTO . AVG
III.

the carriage-road just beyond the Torre de' Schiavi to the left, and then runs nearly parallel to the carriage-road, but gradually diverging from it, and goes in a direct line for Præneste. The Aqua Virgo is carried along the bank of this road, and the respirators or ventilators of it may be seen by the side of this road; but they continue on in a straight line towards Rome, and do not turn along the branch-road to the Torre de' Schiavi, but pass along the bank of a hollow-way behind these very picturesque ruins. There are remains of tombs along the bank of this old road. It seems evident that this was the old Via Prænestina, or the direct road to Præneste. By observing this, and so finding that the present carriage-road is not the Via Prænestina of Frontinus, we were enabled to discover the sources of the Aqua Appia, so long sought for in vain. Those of the Aqua Virgo are on the same road a mile further on; these were previously known, as that water is still in use, and under the care of the Aquarii of Rome at the present time, supplying the fountain of Trevi. The present carriage-road (the ancient Via Gabina) is called Via di Ponte Nona on account of the very remarkable and fine ancient bridge upon it near Gabii. The village or tenement near the sources of the Aqua Appia is called la Rustica, and that near the sources of the Aqua Virgo, Salone. These sites agree with the passages relating to them in Frontinus and Pliny^x.

Remains of two other ancient branch-roads may be traced by the pavement and other indications near Gabii. One along the line of the stream called the Osa is the VIA GABINA^y, it goes into the town of Gabii at the tenement called Castiglione.

At the first mile on this road is the vineyard of the Irish Dominican monks of S. Clement, in which is a large circular mausoleum 142 feet in diameter, called Torraccio^z. At the second mile the road is cut through the tufa rock, to the depth of about eighteen feet, in descending to the level of the valley and the stream called

^x Frontinus de Aquæductibus, caps. 5, 10; Plinii, Nat. Hist., lib. xxxi. c. 25.

^y Livii Hist., lib. ii. c. 12, and lib. v. c. 49.

^z This cepotafium, or mausoleum, was constructed in a garden (cepotafium is derived by Gori from the Greek word κήπος, 'garden,' and τάφος, 'tomb') by Marcus Aurelius Syntomus and Aurelia Marciana, according to the inscription there discovered:—

D . M

M . AVRELIVS . SYNTOMVS . ET

AVRELIA . MARCIANA . AEDIFICIVM
CVM . CEPOTAFIO . ET . MEMORIAM
A . SOLO . FECERVNT . SIBI . ET . FILIS
SVIS . AVRELIO . LEONTIO . ET . AVRELI
AE . FRVCTVOSAE . ET . LIB . LIBER
POSTERISQVE EORVM

The repair of the Via Gabina is recorded by an inscription, given by Gruter, p. 150, and by Volpi, tom. ix. lib. 17, cap. 3, p. 280.

P . SCAPTIVS . P . F .

GABINAM . VIAM . ORNARI . AC .
REFICI .

SVA IMPENSA . CVRAVIT.

Acqua Bollicante. At the third mile are remains of several tombs of the brickwork of the Empire, and some earlier, and a large round mausoleum with the ruins of a mediæval tower built upon it, called the Torre de' Schiavi. Here are also several *castella-aquarum* or great reservoirs of water, some of the first century, others of the third, of the time of the Gordiani, whose villa is supposed to have been here, though this is disputed.

At eight miles and a quarter from the Porta Maggiore is the Ponte di Nona, which shews that the road was measured from the inner gate of the City, not from the wall of *enceinte*. The ancient bridge is 320 feet long, and has seven arches built of the large quadrangular masses of Gabii stone, or Lapis Gabinus, and of red tufa, with great buttresses and pilasters. The pavement is of polygonal basaltic stones, and at the side it is 21 feet wide. This bridge is evidently of two periods, both very ancient. The level has been raised when the level of the road was altered, it was originally very low.

The VIA PRÆNESTINA now ^a passes through the outer wall at the Porta Maggiore, by the side of the Via Labicana.

We have traced this road from the Porta Maggiore to the Vicolo del Ranocchio, where we found remains of the paving-stones; and the valley of the Acqua Bollicante, where the pillars of the bridge remain, and in which may be seen the aqueduct of the Virgo, turning under the hill to the left, and crossing the Via Tiburtina. The road there passes through a hollow way, with cliffs on each side. Then, after passing another valley, not so wide, in the direction of the Torre de' Schiavi, to the left of the present road, are remains of a tomb faced with reticulated work. Then comes a large plain, in which the road follows the same line as the aqueduct of the Virgo as far as the "Bocca di Leone," when the road leaves on the left-hand a tomb cut out of the tufa rock. From "Bocca di Leone" to "la Rustica" and Salone, there is a branch-road from the Via Gabina (the present carriage-road) to the Via Prænestina, here at present a cart-road only (as has been said) still in use. The ancient pavement is visible on a slope near the ruins of Gabii. Festus, writing in the fourth century, mentions a Porta Conlatina ^b. This

^a Four gates, now closed, can be seen in the Wall of Aurelian between the Porta Maggiore and the Porta di S. Lorenzo. The first two are the postern and the Porta Prænestina; the third is the Porta Conlatina of Festus V., Conlatia; and the last is the postern of the Porta Tiburtina or of S. Lorenzo. In the time of the lower empire those

gates were closed, and the Via Prænestina turned through the Porta Labicana or Maggiore.

^b "Conlatia Oppidum fuit prope Romam eo quod ibi opes aliarum civitatum fuerint conlatæ: a quo porta Romæ Conlatina dicta est." (Festus voce Conlatia.)

gate appears to have been on the site of the one now visible in the Wall of Aurelian, though long since walled up, between the Porta Maggiore and the Porta di S. Lorenzo. The road which passed through this gate went in a straight line from Collatia to Rome, that is, to *the City*, passing through the outer enclosure, and the *pomærium* between that and the city wall. Collatia is believed to have been identified with the ancient fortress called "Lunghezza," where the scarped cliffs and the great foss remain intact. This road may be traced from that gate, now closed, passing by the great cemetery of S. Lorenzo f. m., called the Campo-Santo, in which the pavement was found in 1868, in a large pit in the burial-ground near the portico. It appears again near the Ponte Nano and the tenement called the Cervelletta.

The springs of the branch aqueduct added by Augustus to the Appia, according to Frontinus, are near the Via Collatina. Then having passed by the Necropolis of Collatia, we see it again in the galleries or grottoes of la Rustica, which are very ancient stone-quarries of the time of the kings of Rome, along the bank of the river Anio. The road between Collatia and Salone leaves on the left hand a tomb made in the rock, and on the right hand the springs of the Aqua Virgo, and passes along the line of the foss, called the Rivus Herculaneus by Pliny, to the city of Collatia. This foss was perhaps so called because the stream of water which runs along it ran with great strength and force in this part. The same name was given (probably for the same cause) to the stream in the old *specus* near the Porta Maggiore, which received the surplus water of many of the later aqueducts^c.

The VIA TIBURTINA led to Tibur, now Tivoli^d. It is easily recognised in the road that passes through the Porta di S. Lorenzo. The more direct road, or perhaps another branch of the same road, passed through the gate on the south side from the Prætorian Camp, now called Porta Chiusa, passing through the old road called Via Cupa^e, or the dark road, because it passes through a deep cutting

^c Others are of opinion that the Rivus Herculaneus was so called because it has medicinal waters at this point.

^d See Fabio Gori, "Viaggio a Tivoli e Subiaco," Roma, 1855, 8vo.; and "Nuova Guida al Lago di Fucino."

^e To this deep hollow way, and others to the right and left of it, called "Vicolo del Ranocchio," delle Mattonelle, must be referred the passage in Livy, lib. xxvi., relating that the Consuls con-

cealed a body of deserters in ambush in the Viæ Cavæ, or foss-ways between the Ponte Mammolo on the bank of the Anio, held by Hannibal, and the walls of Rome, to defend the city. A similar history is recorded by Procopius in the siege by the Goths: a body of men were concealed in ambush in the foss-way between the Mausoleum of Hadrian, or Castle of S. Angelo, and the Vatican.

or foss-way just outside of Rome ; this deep hollow way, even after it is united with the present road to Tivoli near the Campo Santo, is cut out of the rock to the depth of seven yards, or twenty-one feet.

The Prætorian Camp is on high ground outside of the Wall of Aurelian ; but between that and the Sessorium, now Santa Croce, is a wide and deep foss of the time of the Kings of Rome, probably made by Tarquinius Superbus, when he raised his great outer bank, with these two fortresses to protect the two ends of it. The old road going through the Porta Chiusa skirted the end of this great foss ; the old road in the first century passed under the arch of Augustus at the Porta S. Lorenzo, about fifteen feet below the present level, and went at the bottom of the old foss, or was slightly raised on a bank across it. But in the fourth century, when the fortress of Honorius was built round the old gate on the level of the soil (which is the same now that it was then, in the year 400), the road was also made on the same level, and carried upon a high bank across the foss ; this is partly concealed here by walls and sloping banks made for cultivation^f. At two miles on the Via Tiburtina is the Ponte Mammolo, and at fourteen miles the Ponte Lucano, near to which is the circular tomb or mausoleum of the Consul Marcus Plautius Silvanus.

The VIA NOMENTANA goes to Nomentum near Mentana, passes the Porta Nomentana near the Porta Pia. The picturesque bridge called "Ponte Nomentano" still remains visible at two miles from Rome. The pavement may also be seen at six miles from Rome on this road. Beyond the bridge are the branch roads of Cecchina, and of the Vigne Nuove to the left, the ancient Via Patinaria, where, in the villa of his freedman Phaons, about four miles from Rome, Nero killed himself, according to Suetonius.

The VIA SALARIA and the Via Flaminia issued from the Porta Collina and the Porta Ratumena near the north-east corner of the City, and retain still their old names ; but of the fine Ponte Salaro nothing remains but the piers of the arches ; the bridge was blown up by the Pontifical soldiers to prevent the approach of the Garibaldians in 1867. The line of the Via Salaria can be recognised in the old road to Monte-Rotondo at the waters called Labanæ, near Grotta Marozza^g and Rieti.

On the VIA FLAMINIA still exist the tomb of Bibulus, the mauso-

^f The same thing is now distinctly visible at the Porta S. Giovanni and the Porta Asinaria by the side of it, 20 ft. below the level.

^g See Gori, "Studi dal Ponte Salaro di Roma a Fidene, Crustumerio ed. Ereto. Roma, Tip. delle Belle Arti, 1863," pp. 31, 32, 68.

leum of Augustus, the great Ponte Molle or Pons Molvius, Mulvius, Milvius; and at the Tor di Quinto the tomb of the family of Naso, of which the pictures have been so admirably drawn and engraved by Sante Bartoli.

At Prima Porta, where the Via Tiberina branches off to the left, are remains of the Villa of the Cæsars "ad Gallinas," in which, in 1863, was found the fine statue of Augustus in armour, now placed in the Vatican Museum. At about ten miles, on the Via Flaminia, is the artificial cutting in the rock, 145 feet long, which has given the name of Pietra Pertusa^h.

The great national road, now called CASSIA, went from the Ponte Molle to La Storta, but is the ancient Claudia or Clodia of Ovidⁱ: this road passes near the sarcophagus of Publius Vibius Marianus, miscalled Sepultura di Nerone, who was buried in his tomb near the Porta Flaminia. The Cassia is the Via di Monte Mario, which perhaps entered at the Porta Triumphalis, at the foot of the Capitol, passing the Tiber on the Pons Triumphalis, between the hospital of S. Spirito and the church of S. Giovanni de' Fiorentini. This road is also called on inscriptions^k Via Triumphalis.

In the passage from Cicero^l he describes his going to Modena by the Via Flaminia along the shore of the Adriatic, by the Via Aurelia along the shore of the Mediterranean, and by the Via Cassia, which passed between the two, then the Via Claudia, which branched off at the Ponte Molle from the Via Flaminia, and therefore was not considered as going from the gates of Rome. The Via Aurelia was the road to Civita Vecchia, which now goes through the gate called Porta Cavalleggeri, succeeding to the Porta Aurelia, which was near the Pons Ælius and the castle of S. Angelo. The Via Cassia could only be the road across the middle of Monte Mario. The VIA AURELIA, called in some inscriptions Aurelia Vetus, is the present road from the Porta di S. Pancrazio, by the side of which were many fine tombs, in the garden of the Villa Corsini, drawn and engraved by Sante Bartoli. The Via Aurelia Nova passed under the Janiculum, and was united with the Via Aurelia Vetus at three miles and a half from the Porta Cavalleggeri.

The VIA VITELLIA branched off to the left from the Via Aurelia

^h See Fabio Gori, "Descrizione della Via Flaminia fino a Capena ed al Fano di Feronia," published in the "Annali dell' Istituto di Corrispondenza Archeologica" in the year 1864.

ⁱ "Spectat Flaminiae Claudia juncta viæ." (Ovid., Epist. ex Ponto, lib. i.

Epist. viii.)

^k Published by Gruter, Nos. 1081, 457.

^l "Tres viæ sunt ad Mutinam. A supero mari Flaminia, ab infero Aurelia, media Cassia." (Cicero, Philipp., xii. c. 9.)

Vetus, near the church of S. Pancrazio on the Janiculum, its course being direct towards the sea. This road is mentioned by Suetonius in the Life of Vitellius^m.

The VIA CORNELIA leaves the Via Aurelia Nova at about two miles from Rome to the right, and is the present road of S. Rufina and of Tragliata.

VIA PORTUENSIS.—Nibby contends that the present road to Porto, or Fiumicino, was made by Pope Paul V., A.D. 1610, and was not the ancient Via Portuensis (so called because it led to the city of Portus), which passed under the Porta Portuensis, destroyed by Pope Urban VIII. It is certain that the ancient *via* started from the gate in the wall of the *agger* and foss-way of Servius Tullius, between the Janiculum and the City, near the monastery of S. Crisogono, in the garden of which, in 1866, a portion of tufa wall of that period was found; it then passed by La Magliana, and along the bank of the Tiber to Portus. This road was also called Via Campana, as is shewn by an inscription on a terminal *cippus* found on this road, and published by Biondiⁿ.

The inscriptions belonged to the College of the Arvales, the remains of which may be seen at five miles from Rome on the Via Campana, or on the modern road to Magliana. There are considerable remains of the temple of the third century, the crypt of which is now a wine-cellar. Here was also a sacred grove dedicated to the goddess Dia^o. The remains are now in the Vigna Ceccarelli, in which there is also a catacomb of the fifth and sixth centuries of unusual interest, because the graves have not been rifled as is usually the case, but are for the most part left unopened; the mouth of each grave is usually covered by three tiles, with the mortar round them as fresh as if put up yesterday; and on this mortar are interesting Graffiti, or marks scratched on the plaster while it was wet, by means of which the surviving relatives could distinguish each grave. On one of these the names of the consuls are given (Modestus and Aristeus, A.D. 372).

^m “. . . Viam Vitelliam ab Janiculo ad mare usque” (Suetonius, in Vitellio, c. 1.)

ⁿ Biondi, “Di tre Cippi terminali scoperti nella riva destra del Tevere; Dissertazione.” Roma, 1838.

PARTES
INTRORSVS . AD
VIAM . CAMPANA
VERSVS . AD . PROXIM
CIPPVM . PROPRIVS . IN

LOCO . PROPRIO . HORTORV
COCCEIANORVM . ONERI
FERVENDO . VIGILIARIO
QVOD . EST . HORTORVM
TITIANORVM . NONIAE . C . F
R . R . L . P . LVI

• See Pellegrini, “Edifizi del Collegio de’ fratelli Arvali;” and Henzen, “Scavi nel bosco sacro de’ fratelli Arvali.”

At S. Passera remains of the pavement of the old road may be seen with the substructure, and at Pian due Torri are remains of some tombs.

The mere inspection of the remains of the roads of the ancient Romans is sufficient to shew that there is no exaggeration in the words of Strabo and Dionysius,—that their roads, with their aqueducts and their drains, were among the wonders of the world. These roads were not merely paved with polygonal blocks of basaltic lava^p, but also, to make them as short as possible, they were carried in straight lines over hill and dale, the tops of the hills cut through by deep trenches, as we see still in many places, for these great works of antiquity can never be effaced; or carried across valleys on embankments when necessary, as we may also see. By means of these roads or streets (*viæ*), placed under the inspection of persons of distinction called *Curatores viarum*, the Romans in their capital city could communicate with the principal cities of the world as then known; so that it became a true proverb, that “all roads lead to Rome.”

Another invention, entirely Roman, was, and is still, of the greatest convenience everywhere, that of putting a *cippus*, or *milliarium*, or milestone, with the number upon it at each mile on every high road. This happy invention we owe, according to Plutarch, to the Tribune Caius Gracchus.

The manner of constructing these roads is described by Statius^q, and we may see this verified in hundreds of examples^r. These magnificent roads were made to last a thousand years, as they have done wherever they have not been disturbed. For this reason, before the invention of railroads, there was no more convenient mode of transporting armies and all the machines of war, than had been used by the ancient Romans to keep the command over every corner of their enormous Empire.

^p Isidorus (Orig., lib. xv. c. 16, de Itin.) says that the Romans learned from the Carthaginians the art of making paved roads.

^q “Quis duri silicis, gravisque ferri

Immanis sonus, æquum propinquum
Saxosæ latus Appiæ replevit.”

(Statii, Sylv., lib. iv. § 3.)

^r Champollion Figeac. *Cantù Storia Univers.*, tom. iii. n. 29.

HISTORICAL PHOTOGRAPHS ILLUSTRATING THE WALLS AND GATES OF ROME.

ARRANGED IN TOPOGRAPHICAL ORDER, BEGINNING AT THE NORTH END
OF ROME, THE PORTA FLAMINIA, OR DEL POPOLO.

[*The numbers refer to Mr. Parker's Catalogue.*]

*Those numbers marked with * are from drawings, valuable for historical
purposes, but not as photographs.*

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|---|---|
| <p>I. PORTA DEL POPOLO TO PORTA
PINCIANA.</p> <p>Porta del Popolo, Exterior, A.D. 1562,
(built from a design of Michael An-
gelo,) with the entrance to the Eng-
lish Chapel. 1353</p> <p>MURO TORTO. Part of the northern side
of the Palace of Sylla(?), B.C. 70. 1</p> <p>Another view, shewing the over-
hanging wall in the lower part, and
the upper part vertical, in a series of
niches and buttresses. The construc-
tion is of rubble faced with small
diamond-shaped blocks of tufa, an
early example of Opus Reticulatum,
or net-work. The angles are formed
of oblong blocks of tufa, of nearly the
shape of modern English bricks, but
a little larger; they are often mistaken
for bricks. This wall was considered
as under the special protection of
S. Peter at the time of the siege by
the Goths, (Procopius, de Bello Go-
thico, ii. 29.) 762</p> <p>— Palace of Sylla (?), B.C. 70. Part
of the Eastern side (now concealed
by a hideous modern wall) built to
support the earth and promenade. 2</p> <p>— Details of this, Opus Reticulatum.
On this side the wall is built in a
double series of niches, correspond-
ing with the upper part of the north-
ern side. 1533</p> <p>Towers and Wall now under the Villa
Medici: the lower part, repairs of
Belisarius, c. A.D. 520 (?), the upper
part modern. 3</p> | <p>View from a bastion in the garden of the
French Academy, to shew an angle
of the wall and the foss-way. 1301</p> <p>Palace of Sylla, B.C. 80 (?). <i>Plan</i>, with
the Muro Torto, the Porta Flaminia,
and the Piazza del Popolo. 170*</p> <p>Tower of Aurelian, A.D. 275, the only
one that remains perfect. 64</p> <p>Other Towers of Aurelian (Vopiscus,
39). 4</p> <p>Part destroyed by the Goths, and re-
built under Belisarius, c. A.D. 520 (?).
Under the wall is a part of the arcade
of the Aqua Virgo, the old line of
which passed along on this bank.
(Procopius, de Bello Gothico, lib. i.
c. xxiii. and lib. ii. c. ix.) This has
been <i>restored</i> in 1871. 5</p> <p>2. PORTA PINCIANA TO PORTA
SALARIA.</p> <p>Porta Pinciana, Honorius, A.D. 403 (In-
scription), partly rebuilt by King
Theodoric, A.D. 520 (Cassiodorus). 6</p> <p>— Exterior, Stone Arch, A.D. 403,
Honorius (Brick Towers, Theodoric,
A.D. 520). 668</p> <p>— Interior, with part of the Wall of
Aurelian, and of the Corridor for the
sentinels. 1300</p> <p>Two Towers near the Porta Pinciana ;
1. of Brick, of Aurelian, A.D. 275,
built on the old Mœnia ; 2. repaired
by the Popes, c. A.D. 850. 671</p> <p>Other Towers and Wall of Aurelian,
A.D. 275. 670</p> |
|---|---|

3. PORTA SALARIA TO PORTA DI S. LORENZO,
Passing by the modern Porta Pia, the remains of the Porta Nomentana, and the Prætorian Camp.
- PORTA SALARIA, Honorius, A.D. 403, see p. 198; *now destroyed.* 7
 View of the Porta Pia, taken after the bombardment by the Italian troops in 1870. 1949
 The breach made in the Wall near the Porta Pia by the Italian troops in 1870. 1950
 Necessarium on the Wall, A.D. 850 (?), near the Porta Salaria. 669
 Remains of the Porta Nomentana, Honorius, A.D. 400. 8
 Postern on the outer edge of the foss of the Prætorian Camp. 9
 — Postern on the inner side of the foss. 10
 PRÆTORIAN CAMP. *Plan*, according to Canina, time of Tiberius, A.D. 30 (dated by Medals). 179*
 — Northern Gate. 11
 — Details of the North Gate, with Windows of Terra Cotta. 12
 — Specus of an Aqueduct under the north Wall, with Reticulated-work of earlier character, under the brick Wall of Tiberius. 870
 — One of the Sleeping-places of the Guards in the inside of the Wall. 604
 — View of part of the Interior of the North Wall, A.D. 30, shewing the inside of a tower at the north-east angle, with part of the Corridor and sleeping-places for the Guards under the arches. 180
 — East Wall, A.D. 30, rebuilt. 13
 — Part of East Wall and Corner Tower, with corbels for a Hourd or wooden Gallery cut off, and repairs c. A.D. 350 (?). In the angle on the ground is shewn a wooden railing for protection against cattle in the road. 14
 — Towers at S.E. corner, shewing the construction in Opus Lateritium or brickwork of that period. 15

PRÆTORIAN CAMP (*continued*).

- Part of the South Wall, rebuilt of the split stones of the Wall of the Kings, B.C. 550 (?), in repairs after the war with the Goths, A.D. 520. (Procopius.) 17
 — Another part of the South Wall, rebuilt of stones of the old Wall of the Kings. 16
 — Part of the South Wall, as restored after the war with the Goths, and the Gateway, called the Porta Chiusa, the outer face by Honorius, A.D. 400. 18
 PORTA CHIUSA, interior, before the Excavations. Tiberius (?) altered by Honorius with older materials. 1056
 — Interior, shewing Stone Jambs of stones of the Kings, and Cornice of the Republic behind the archway of Honorius. 659
 — View of the Interior of the Porta Chiusa, *from a Drawing.* 1146*
 — Interior, as visible in 1868, shewing the early construction of the northern jamb. 1058
 — Interior, shewing the Specus of an Aqueduct (Anio Vetus?), under the southern jamb. 1057
 Portion of the Wall built of Tufa blocks in the style of the Kings, rebuilt with old materials, between the Prætorian Camp and the Porta di S. Lorenzo. 965
 Angle of the portion of the Stone Wall, rebuilt. 966
 Interior of Wall south of the Porta Chiusa, shewing a Castellum Aquæ with the wall built across it when it was rebuilt of old materials. 1059
4. PORTA DI S. LORENZO TO THE PORTA MAGGIORE.
- PORTA TIBURTINA, OR DI S. LORENZO (called Viminalis by Frontinus), Side View, exterior, the stone-work of Honorius, A.D. 403, the square brick towers rebuilt. 19
 Porta Tiburtina (or di S. Lorenzo), exterior, Front View. 22

Arch of Augustus at the Porta Tiburtina, with two inscriptions of the Aqueducts, one of Augustus, B.C. 3, the other of repairs by Caracalla, A.D. 212; the Aqueducts Marcia, Tepula, and Julia over it, (the jambs of the arch are buried by the filling up of the foss-way). 21

— Interior, Arch of Augustus, A.U.C. 750, B.C. 3, and the inner Arch of Honorius, A.D. 403, (destroyed in 1869). 20

— *The same, from a Drawing.* 662*

There were three arches at this gate, the original one of Augustus, to which the Emperor Honorius added a *barbican* or gateway fortress, with an inner and outer gate; the inner gate of these three has now been destroyed.

— *Plan* of the Gate with the Aqueducts and the Castellum Aquæ Tepulæ. 1238*

— *Plan* of the Wall and Aqueducts and fortress of Honorius. 23*

— *Plan* of the Gate with the neighbourhood, shewing the line of the Aqueducts and remains of the Reservoirs of the Tepula and Julia in the Wall of Rome. 1111*

— Section, shewing the different levels of the roads, and of the Aqueducts. 1291*

— Transverse section. 1296*

Towers near the Porta Tiburtina, rebuilt A.D. 1450. 24

Castellum Aquæ Tepulæ, rebuilt by Trajan, built on the old Agger, and incorporated in the Wall, with corbels for a Hourd, or wooden Gallery. 25

Ancient Postern between the Porta S. Lorenzo and the Porta Maggiore, supposed by some to be the Porta Collatina. 27

5. PORTA MAGGIORE TO PORTA ASINARIA.

Porta Prænestina and Labicana, or Maggiore (called by Frontinus, Esquilina), Exterior, A.D. 30, and the Baker's Tomb. 30

Porta Prænestina, from the north, shewing the Conduits of the Aqueducts. 31

— The same, from the north-east, with the Aqueducts over it. 32

— Transverse section, shewing the Aqueducts, &c. 1463*

The SESSORIUM, now S. Croce in Gerusalemme. *The Plan*, with the eastern angle of the Wall, the Aqueduct of Claudius and Nero, the Porta Maggiore, the Amphitheatrum Castrense, Porta Asinaria, &c. 33*

— Part of the Wall outside of the Sessorium, with the lower part of a Tower rebuilt of Tufa. 413

Amphitheatrum Castrense, c. A.D. 100. 34

South Wall near the Sessorium. Aurelian, A.D. 275, exterior, on an older agger, with repairs. 35

— Interior of the same, shewing the Corridor for the sentinels and the inner side of one of the towers. 36

Interior of the Corridor, now in the garden of S. Crocé in Gerusalemme. 414

Exterior of Wall and Towers, c. A.D. 275, built upon the old Mœnia near the Sessorium. 415

— Another portion, built upon earlier work of stone. 416

— Another portion of the Wall, near the Porta Asinaria. 573

6. PORTA ASINARIA TO PORTA DI S. SEBASTIANO,

Passing by the Lateran Palace and Gate, the Porta Metronia and P. Latina.

Porta S. Giovanni, A.D. 1574, (with the embrasure for cannon in the year 1868.) 1319

PORTA ASINARIA, exterior, Aurelian, A.D. 275. 37

Interior, A.D. 275, and repairs, A.D. 403. 417

Porta Asinaria and Porta S. Giovanni, from the mill on the Mariana, on the southern side of Rome. 1318

— Curious Medieval Sculpture in bas-relief of the Porta Asinaria and the ancient Lateran, now in the sacristy of that church. 1726

- Wall across the Foss of the Lateran Palace, on the northern side, built by Belisarius (?) 39
- View of a portion of the Lateran Palace, A.D. 50, included in the Wall of Aurelian. 173
- LATERAN PALACE. Eastern angle, much mutilated. 41
- Remains of another part of the House of Plautius Lateranus, incorporated in the City Wall. 571
- Lateran Palace, Plan, with part of the Wall of Aurelian. 38*
- PORTA LATERANENSIS, Arch of the Gate now closed. 40
- Arch, as excavated in 1868. 1096
- Wall or Jamb of the Gate (?) or Postern (?), and portion of an earlier Tomb. 1097
- *The same, from a Drawing.* 1149*
- The Lateran from the Marrana, shewing the position of the Porta Lateranensis in the angle. 1309
- Tower of Aurelian near the Lateran, A.D. 275, with stones of the Wall of the Kings built up against the foot of it by Belisarius (removed A.D. 1869). "Having only a short time to repair the walls, he collected the stones which were lying near, and used them in a tumultuous manner." (Procopius, de Bello Gothico, lib. iii. c. 24.) 42
- Two Towers near the Lateran, one of brick of Aurelian, A.D. 275, the other built of stones of the Wall of the Kings, B.C. 650. 43
- PORTA METRONIA, interior, A.D. 275, with repairs, A.D. 1157, shewing also part of the Corridor of Aurelian, A.D. 275. 44
- Interior, with Inscription, recording repairs by the Senate, A.D. 1157. 45
- Within the Walls, View on the south side. 1217
- Towers between the Porta Metronia and Porta Latina, with substructions. 875
- Corridor for the Sentinels within the Wall. 1216
- PORTA LATINA, exterior, Honorius, A.D. 403, and Belisarius, A.D. 535 (?), or Theodoric, A.D. 500. 46
- Interior, Honorius, A.D. 403, with the Chapel of S. John in Olio, A.D. 1520. 47
- Another View. 567
- Interior of side Tower. 1361
7. PORTA APPIA, OR DI S. SEBASTIANO, TO THE PORTA OSTIENSIS, OR DI S. PAOLO.
- General View of the exterior of the Wall, near the Porta di S. Sebastiano. 48
- PORTA APPIA, now di S. Sebastiano, Honorius, A.D. 403, partly rebuilt, and brick towers added by King Theodoric, c. A.D. 520. 49
- Interior, with Arch of Drusus in the foss-way, A.D. 30. 50
- View of the West Side within the Walls, shewing the difference of level when compared with the view outside the Walls. 1204
- Interior of part of the western Tower, the lower part stonework of Honorius, A.D. 403, the upper part brickwork of Theodoric, A.D. 520. 1205
- Interior of the Wall of Aurelian, between the Porta Ardeatina and the Porta Appia, shewing the Corridor for the sentinels and the inside of the Towers. 1206
- Corridor for the Sentinels, with the Porta Appia in the distance. 1215
- Marble Steps in the Corridor, probably repairs of the time of Theodoric. 1207
- Corridor for the Sentinels, with Fresco-painting of the Madonna, c. A.D. 520. 1208
- PORTA ARDEATINA, c. A.D. 60. Exterior. 565
- Interior. 566
- Specus of an Aqueduct in the interior of the Wall at the Porta Ardeatina, north-east side. 986

Bastion of Sangallo, A.D. 1540, parts of the Casemate in the interior.

1210, 1211, 1212

— Junction of the Bastion of Sangallo, with the Wall of Aurelian near the Aventine, from above. 1218

— *Plan and Sections* of parts near the Bastion of Sangallo, shewing the difference of the levels within and without. 1292*

Interior of a Tower on the Aventine, between the Bastion of Sangallo and the Porta S. Paolo, rebuilt in the fourth century, and again in the Middle Ages, as shewn by the construction. 1213

Tower near the Aventine and S. Sabba, interior, rebuilt in the Middle Ages. 1214

Initials and Arms of Nicholas V., in brick, A.D. 1450. 973

Interior on the Pseudo-Aventine, shewing part of the Brick Wall and one of the Towers of Aurelian, A.D. 275, built against the cliff of the hill. 223

Interior of part of the Corridor and Tower, built upon older work. 363

Interior of a Tower and part of the Corridor. 267

Perspective View from the Pseudo-Aventine to the Tiber, with the Porta Ostiensis or S. Paolo and the pyramid of Caius Cestius. This part of the wall is built in the bottom of the great foss. 140

S. PORTA OSTIENSIS TO THE TIBER.

PORTA OSTIENSIS, now di S. Paolo, Honorius, exterior, A.D. 403, partly rebuilt by King Theodoric, *c.* A.D. 520. 51

— Interior, Theodoric, A.D. 520, the two arches earlier. 52

— Details of the Fortifications, Theodoric, A.D. 520. 53

— Interior of Battlements, Theodoric, A.D. 520. 54

— Corridor, with Parapet and Battlements, Theodoric, A.D. 520. 55

PORTA OSTIENSIS (*continued*).

— *Plans* of the two Stories. 350*

— *Plan* of the Gateway and the neighbourhood. 1294*

— Section of the Gateway and Towers, with the Pyramid of Caius Cestius and Pavement of the Via Ostiensis. 1293*

Ruined Towers between the Porta Ostiensis, now di S. Paolo, and the Tiber, A.D. 850 and 1450. 56

— Ruined Tower at the Angle next the Tiber, A.D. 850. 57

9. THE TRASTEVERE.

PORTA PORTESE OR PORTUENSIS. 1305

Ruins of part of the Wall of Aurelian on the south side of the Janiculum, Exterior. 955

— Interior. 954

— Interior of a Tower of Aurelian, between the Janiculum and the Tiber. 952

Foss of the Janiculum, from near S. Pietro in Montorio, looking down. 957

Inner Foss of the Janiculum, south side, looking upwards. 953

Foss of the Janiculum, south side, from below, taken in 1867, before the erection of the new battery. 956

Tower in the Garden of the Villa Corsini in Trastevere, between the Janiculum and the Porta Settimiana, with medieval repairs. 949

Wall between the Porta Settimiana and the Janiculum, Interior. 951

PORTA SETTIMIANA in Trastevere as rebuilt, *c.* A.D. 1450. 1306, 1075

Tower of Aurelian in the Trastevere, between the Porta Settimiana and the Tiber, A.D. 275. 945

Second Tower of Aurelian, between the Porta Settimiana and the Tiber. 948

Tower of Aurelian in the Trastevere, near the Tiber, A.D. 275. 946

Construction of a Tower of Aurelian, A.D. 275, near the Porta Settimiana. 947

North End of the Wall of Aurelian in the Tiber, near Ponte Sisto, on the Trastevere side. 1036

Towers in the Tiber, near S. Giovanni de' Fiorentini.	919	The Tower of the Winds enclosed in the Walls of Urban VIII.	225
Vatican Fortress, Scarp'd Cliff of the time of the Kings, on the south side, near Porta S. Spirito.	958	PORTA S. SPIRITO, by Sangallo, in the Borgo, or Leonine City.	1455
Scarp'd Cliff of the Vatican, and Wall of Sangallo built upon it, near the Porta S. Spirito.	959	PORTA CAVALLEGGERI in the Leonine City.	1313
Wall of the Leonine City, exterior, A.D. 850.	1312	PORTA ANGELICA in the Borgo, or Leonine City, A.D. 1540, with the Vatican Palace in the background, (and an embrasure for cannon,) in 1868.	1354
— Loop-hole, A.D. 850.	962		

The Porta Salaria was destroyed in 1871 by the municipal architect, in the course of what he calls the *restoration* of the Wall. Some interesting tombs of the first century were found buried in the round towers of Honorius, in the same manner as the Baker's tomb had been found at the Porta Maggiore in 1833.

Tomb of Sulpicius Maximus.	2070
Tomb resembling that of Bibulus.	2069
Circular Tomb faced with Opus Reticulatum.	2071

ERRATA ET CORRIGENDA.

WALLS AND GATES OF ROME.

Errata.

- p.* ix. *line* 33. de S. Paolo.
Ibid., *line* 39. Trinita de Monti.
p. xi. *line* 16. Monte Testacio.
p. 98, *lines* 22 and 37. Torre di Conti.
p. 99, *line* 1. Torre di Milizie.
p. 101, *line* 31. This was in the palace called Cesi in the Vatican, and was destroyed to enlarge *the great church of S. Peter*.
p. 105, *lines* 32 and 39. nepoti.
p. 113, *note* 1. Via di Cerchi.
p. 118, *note* 0. Hic actis.
p. 126. *line* 3. the small church of S. Silvestro in Palatio.
p. 127, *line* 2. [Siracusan Prænestina].
p. 127, *line* 23. Martinus Polenus.
p. 131, *line* 40. the tomb of Nero.
p. 132, *line* 31. Saracenesco.
p. 142, *line* 15. Tajan.
p. 144, *line* 25. Prince Massini.
p. 146, *line* 4. the water from the Aqua Crabra and the Marrana combined.
p. 153, *line* 24. An inscription is mentioned by the Einsiedlen Chronicle, &c., and note d.
Ibid., *note* d. tribunici.
p. 157, *line* 7. Censius.
Ibid., *line* 23. Burgo.

Corrigenda.

- di S. Paolo.
Trinità de' Monti.
Monte Testaccio.
Tor de' Conti.
Torre delle Milizie.
This was in the palace called Cesi in the Vatican, which was destroyed to enlarge *the place in front* of the Church of S. Peter; but the works of art were preserved, and carried to the Museums.
nepote.
Via de' Cerchi.
His actis.
the small church of S. Sebastiano in Pallara.
[Lavicana ?].
Martinus Polonus.
the tomb of Sylla.
Saracinesco.
Trajan.
Prince Massimo.
the water from the Aqua Crabra, Julia, and Tepula combined.
The inscription quoted in the note only shews that Commodus was buried in that Mausoleum, *not* that the Mausoleum was not finished until his time.
tribuniciaë.
Cencius.
Borgo.

Errata.

p. 164, *note* n. Aucto R. P. F. Jacobo
de Albericis a. Sarnico Bergonensi.

p. 169, *line* 43. de Fiesole.

p. 170, *line* 16. Capella.

Corrigenda.

Auctore R. P. F. Jacobo de Albericis
a Sarnico Bergomensis.

da Fiesole.

Cappella.

ANCIENT STREETS AND ROADS.

p. 177, *note* h. Francesci.

p. 179, *note* k. II. XI.

p. 197, *line* 2. Casemate.

Francesi.

M. XI.

Casematte.

CONSTRUCTION OF WALLS.

PREFACE.

THE manner of constructing walls at different periods is of the greatest importance for the elucidation of the history of architecture, more especially in Rome, where the difference of construction of each period is so very marked. Even in England and France it is usual for experienced eyes to read off the date of a building at sight, within twenty years. In Rome, the distinctions are so much more broad and marked, that it is far more easy. The great oblong blocks of tufa mark the time of the Kings, the massive walls of concrete or rubble mark that of the Republic, and the concrete with the surface faced with brick, or reticulated work, or marble, that of the early Empire, each as a rough general rule. In England, the mouldings are considered as the only safe guide to the date of a building, but the construction should be considered also, no one feature can be depended on by itself. The same mouldings are often used again, when the church has had a vault with a clerestory added, as was frequently the case in the latter part of the twelfth century and the beginning of the thirteenth. In Rome, we have to do with buildings perhaps fifteen hundred years older than any we have in England, and although the same habit of careful observation applies everywhere, in the earlier period we have no mouldings at all, unless a flat projecting cornice or string-course can be so called. We must therefore rely on the construction only, and then we must always bear in mind the quarries from which the stone was taken ; but as in Rome we know that the early Romans had not access to any quarries but those in Rome itself, or the immediate neighbourhood, for the first hundred years, we may expect that where we find *tufa* alone used, and a rude mode of construction without mortar (for lime-stone also was very scarce in that district), we have to do with buildings of the first century of Rome. After the conquest of Alba Longa, at about the end of that century, *peperino* was added from the quarries in the Alban hills. After the lapse of another century, the *sperone* came in from the quarries at Gabii, in the time of the Tarquins, and the early part of the Republic. The excellent lime-stone called *travertine*, from the quarries at Tivoli, did not come into general use in Rome until four centuries later, and was soon followed by marble

from more distant countries. Independently of these building materials, which it is not always easy to distinguish at first sight, the construction itself is a sufficient guide, and we can see the difference when it has been once pointed out, between the wide vertical joints of the early period, into which a cane can be thrust, and the closely-fitted joints and well-cut stone of the second period, and the iron clamps, or the holes from which they have fallen, in the third period.

The distinction between the large blocks of the time of the Kings, and the rough walls of the Republic, and the brick, and marble, and reticulated work of the Empire, is obvious to a mere child, when he has once been shewn that each is the mark of a particular period of history. When we come to the Empire, the different thickness of the bricks is also very obvious when once pointed out: we have good historical types of each century as a guide. We know that the reticulated-work is not found after the time of Hadrian, and that the very fine brick-work also ceases at that time. There is no place like Rome for the number of historical and dated examples of each change in the fashion of construction to serve as types, and this has been well said to be the basis of all archæology, the foundation upon which it was all built. The remarkable thing is, that so little attention has hitherto been paid to that point. The present work is believed to be the first in which any attention has been given to it.

During the Medieval period, Rome was very much behind the west of Europe in construction, and it is therefore of secondary importance; at best it was only a good imitation of that of the early Empire, and most of the buildings were constructed only of old materials worked up again. The struggles and difficulties from which the medieval style originated were unknown in Rome, where old materials were always over abundant. The miserable result, in an architectural point of view, is well known,—the medieval buildings of Rome are contemptible in construction.

CONTENTS.

	PAGE
BUILDING MATERIALS. 1. Tufa	I
2. Peperino, or Albano stone, <i>Lapis Albanus</i>	ib.
3. Sperone, or Gabii stone, <i>Lapis Gabinus</i>	2
4. Travertine or Tivoli stone, <i>Lapis Tiburtinus</i>	ib.
5. Selce or <i>Silex</i> , a hard lava resembling flint	ib.
6. Pumice-stone, <i>Pumicæ</i>	ib.
7. Brick, <i>Later</i>	3
8. Mortar, <i>Materia</i> , and the cement for water, called in Italian, <i>Coccio Pesto</i> , in Latin, <i>Opus Signinum</i>	ib.
CONSTRUCTION. <i>Opus Quadratum</i> , squared stone	4
This construction was used in the Temple of Solomon	5
CYCLOPEAN MASONRY. The size of the stones was influenced by the quarry, as at Baalbec	6
The large stones were clamped together with wood or metal	7
Instances of the use of Peperino and of Sperone	ib.
<i>Opus Quadratum</i> was used in the time of the Kings of Rome, and is generally of that period	8
———— but was occasionally continued in the time of the Republic	ib.
<i>Arco di Pantano</i> , the arch so-called (in error) is of <i>Sperone</i> , inserted in the ancient wall of tufa	9
Some very early walls have the edges of the stones chamfered off	10
POLYGONAL MASONRY, called also Cyclopean, Phenician, and Pelasgic	11
Learned work of M. Petit Radel on this subject	ib.
<i>Opus Incertum</i> of Vitruvius	12
CONCRETE, or Rubble-stone walling, <i>grouting</i> , or filling up, <i>fartura</i>	13
The hardness and durability of this wall, caused by the good mortar made with <i>gritty</i> sand, and good lime <i>pounded and used hot</i>	14
The Roman soldiers could build such walls, skilled labour was not required	15
Blocks of stone of the shape of modern bricks, but rather larger, used for the angles of rubble walls	16
<i>Opus Reticulatum</i> —Net-work	17
The <i>Muro Torto</i> an early example	ib.
MARBLE FACING, numerous examples of	18
Stone or travertine facing on rubble walls	19
OPUS LATERITIUM, brickwork	20
The thickness of the bricks, and of the mortar between them, is a use- ful guide to the date of a wall	21
MIXED CONSTRUCTION, rubble walls with layers of bricks, usually of the fourth century, but also found earlier	23
OPUS SARACENESCA, a facing of small square stones, usually Medieval, but also found earlier	24
Brickwork of the Middle Ages, an imitation of the Old Roman	25

	PAGE
APPENDIX. Opus Lateritium: on BRICK STAMPS	26
Polygonal Masonry	30
Cyclopean Walls	31
The use of the Arch and of Mortar	ib.
Walls of Palestrina	32
CAPITOLIUM OR MUNICIPIUM	33
Ærarium and Tabularium, parts of it	34
The Municipium of Michael Angelo	35
Temple and Gate of Saturn	36
Lowest Story, two Doorways cut in the Rock only	37
Steep Staircase to the Offices of the Ærarium, mentioned by Cicero	ib.
Great Fire in this building in the time of Sylla	ib.
THE ÆRARIUM, called after Saturn by Suetonius and Varro	38
That it was part of this building is shewn by Tacitus, Cæsar, Cicero, Livy, and Plutarch	39
That this building was of great extent is shewn by several authors	40
The <i>Senaculum</i> or Senate-house was in part of this building	41
The upper part of this building was of wood, and had a wooden <i>Porticus</i> or arcade attached to it	42
Temple of Saturn, and Stairs from it to the offices of the Treasury	43
Cicero compares these steep stairs to "climbing the Alps"	44
Temple of Concord, rebuilt by Tiberius	45
— originally built, B.C. 403, <i>fronting</i> the Forum	ib.
<i>One</i> Temple of Concord within the wall of the <i>Arx</i> , <i>not two</i>	46
The Curia, another name for this great building (?)	48
OPUS QUADRATUM, Temple of Jupiter Feretrius, built in the year 4 of Rome by Romulus, in <i>his Arx</i> or Capitol on the Palatine Hill, at the north end	49
Wall to enclose the Hill of Saturn and the Palatine in <i>one City</i>	51
The line of this wall traced by existing remains of it	52
Temple of Jupiter Capitolinus on the Tarpeian rock, built by the Tarquins to commemorate the Conquest of Gabii, and built of Gabii stone	53
Ruins of it remain on the summit of the Tarpeian rock	54
OPUS RETICULATUM.—Domus Augustiana et Tiberiana	54
HOUSE OF HORTENSIVS, purchased by Augustus, site and remains of	55
The Remains, called the House of Augustus by Rancourail and the Roman antiquaries, are part of the Palace of Domitian, whose brick-stamps remain on the walls	56
Augustus lived in the house of Hortensius for forty years	57
The Senate added State Apartments to it. Remains both of the original house and of the additions to it, excavated in 1869—70	ib.
Augustus was born in another part of the Palatine, and the house in which he <i>was born</i> was afterwards made a temple in his honour	58
Palace of Tiberius was on the west side towards the Circus Maximus	59
— Remains of it faced with <i>Opus Reticulatum</i> of his time	ib.
— The description of the interview with Umbricius the Augur by Tacitus agrees with this site	60
Zig-zag road from the Arch of Janus to the summit of the Palatine Hill	61
Bridge of Caligula carried an Aqueduct, and a road from the Palatine to the Capitol across the Forum Romanum,—there are slight remains of it, under the Palatine	62

CHAPTER III.

THE DIFFERENT MODES OF CONSTRUCTION

EMPLOYED IN ANCIENT ROMAN BUILDINGS^a, AND THE PERIODS
WHEN EACH WAS FIRST INTRODUCED.

THE building-materials employed in Rome—besides marble for ornament—are stone, clay for bricks, sand, lime.

The varieties of stone^b are :—

I. *Tufa*, a volcanic sandstone, generally soft and of a light yellow, almost white in summer when it is dry^c, or some varieties light red, called by Vitruvius, *lapis ruber*. The *tophus* of Vitruvius is not the same as the *tufa* of Rome, but corresponds to the *pumex* (VI.) *Tufa* is called by Virgil^d and Pliny^e *tofus*.

The ancient quarries of this are in the Coelian, Aventine, and Capitoline hills, the modern ones in the Campagna^f. The walls of Romulus are entirely of this material, and were probably built from quarries^g in the Palatine Hill itself^h, or cut out of the trenches of the original fortifications. The arches and vaults of the Cloaca Maxima and of the Mamertine Prison are of tufa.

II. *Lapis Albanus*, now called *peperino*, also a volcanic sandstone, but hard and rough, the surface covered with knobs of flint, resembling pepper-corns, hence the name. There are ancient quarries at Albano, near the gate of the town ; another near Alba-Longa, on Monte Cavo. The one at Marino, still in use, is also ancient ; the colour is gray with a tinge of green.

^a In this Chapter I have been much indebted to an essay on the subject by the Cavaliere C. L. Visconti, written for the British Archæological Society of Rome.

^b See Vitruvius de Architectura, lib. ii. c. 7.

^c When tufa is wet and exposed to the weather it is often of quite a dark colour, looking at a distance almost black ; it is a very porous stone, and absorbs the moisture.

^d Virgilii Georgic., lib. vii. v. 214.

^e Plinii Nat. Hist., lib. xvii. s. 4.

^f See Brocchi—Suola fisico di Roma, for a description of the quarries of tufa on the hills of Rome.

^g There are also very large ancient quarries of tufa on the bank of the river Anio, near the sources of the Aqua

Appia, on the edge of the meadows of Lucullus, and another series nearer to Rome called the Caves of Cervaro. It is supposed that the stones for the great Wall of Servius Tullius were brought from these quarries, and were floated down the Anio on rafts.

Tufa varies very much in hardness and other qualities, as well as in colour. The different layers or beds of it in Rome and in the Campagna vary very much in thickness also, but the beds are generally about ten or twelve feet thick, alternately hard and soft.

^h Some of the *latomie*, *lautumie*, or quarries of the Palatine, are visible in the excavations made by the Emperor of the French, near the foundations of the temple said to be that of Jupiter Stator.

Of this material are part of the *agger* of Servius Tullius ; the great wall fifty feet high and twelve thick, on the eastern side of the Forum of Augustus, (with the wall of travertine on the north side of the Forum Transitorium inserted in it, about a fourth of the height,) also the wall on the opposite side of the latter forum, on the greater part of which the backs of the houses are built, but a part has been cased with marble, and had the fine cornice and detached marble columns of the Temple of Pallas built up against it.

III. *Lapis Gabinus*, called *sperone* ; this resembles the *peperino* so much that it is not always easy to distinguish them, but *peperino* is harder than *sperone*. The ancient quarries are at Gabii.

The triple arch at the mouth of the Cloaca Maxima, *inserted* in the tufa wall called the *Pulchrum Littus*—the *Arco de Pantano*ⁱ, also *inserted* in the great tufa wall of the Kings—the substructure of the Tabularium,—and the Ponte di Nono—are all of this material. These two stones resist fire, and were ordered by Nero to be used A.D. 64, after the great fire in Rome. The *Lapis Gabinus* is also believed to have been used originally, before even the *peperino*.

IV. *Lapis Tiburtinus*, called *travertino* or *travertine*, a limestone, the ancient quarries of which are between Tibur or Tivoli and Aquæ Albulæ, near the river Anio. The stone was probably floated down to Rome on rafts. It is white when new, and becomes a warm yellow. The columns of the temple of the Sibyl—the tomb of the Plautia family at Tivoli—the tomb of Cæcilia Metella—and the Colosseum, are well-known examples of this stone. It is the stone generally used in the buildings of the first three centuries of the Christian era in Rome.

V. *Silex*, called *selce*, a basaltic lava resembling iron in colour, and almost as hard ; it gives out sparks when struck with iron^k.

Several currents of this lava cross the Campagna, coming from the crater, now the Lake of Albano, and extending near to Rome : one reaches as far as the tomb of Cæcilia Metella, two miles from Rome on the Via Appia. It is used for concrete, and pavements. It was first used for this latter purpose in A.U.C. 578 (B.C. 145), as mentioned by Livy (xli. 28).

VI. *Pumex*, or pumice-stone, is a very light material, calcareous and full of holes, which is chiefly used for vaulting. The quarries are on Mount Vesuvius. The vaults of the Colosseum and the Pantheon are of this light material.

ⁱ See Cossi—Trattato delle pietre antiche, p. 70. Pliny calls it *Lapis Tusculanus*, Nat. Hist., lib. xxxvi. c. 18.

^k This name is applied also to flint.

VII. *Later*, or brick¹. The walls of Babylon^m, and Persepolis, and other ancient cities, were of brick, frequently sun-dried only, and the only cement used in them was *bitumen*. The Roman bricks are well burnt in kilns, and cemented with good lime-mortar; the earliest are made from the mud of the Tiber. They are not found in Rome before the time of Camillus, and were generally used as external brick linings to concrete walls to make a smooth surface, which was sometimes to be afterwards faced with marble slabs, or to be covered with bronze plates, as at the Pantheon of Agrippa. The most ancient bricks are flat, like tiles, mixed with Pozzolana sand, very well made and very hard.

VIII. *Materia*ⁿ, or mortar, made with lime and sand. The sand is of two kinds; Fossicia, or river sand, and Pozzolana, (*Pulvis Puteolanus*). The quarries of this sand extend over the Campagna on the eastern and southern side of Rome, and are often many miles long, in corridors or roads always at the same level underground, with many branches, and with sidings at intervals to enable the carts to pass each other; the entrances to them are walled up when they are abandoned. The best Pozzolana sand is always rough; it crackles in the hand when rubbed, and leaves no stain on a white dress, as Vitruvius mentions.

The *Materia*, or mortar, if well made, consists of three parts of sand, and one of lime. The lime should always be quite fresh; the mortar then becomes as hard and durable as natural concrete stone. Pounded brick, or sometimes pounded stone, or the dust of stone made in sawing it, is often used instead of Pozzolana sand, in countries where the sand cannot readily be obtained. Whitewash was made with river sand and broken pottery, and should be half lime according to Vitruvius.

A particular kind of mortar or cement was used for the aqueducts in the time of the Empire, called in Latin, *opus signinum*, in Italian, *coccio pesto*. This is made of broken brick or pottery with good fresh lime, *always used hot*. This particular kind of cement is in general a certain indication of an aqueduct, or of one of the reservoirs or filtering-places belonging to them; but it is sometimes used for floors, also to keep out the moisture from the soil beneath, as in the chambers of the Mamertine Prison, when it was partly rebuilt in the time of the Emperor Tiberius.

¹ See Vitruvius, lib. ii. c. 3, de Lateribus. *ter*a; also c. 4, de arena (or sand); c. 5, de calce (or lime); c. 6, de pul-

^m Herodotus, Clio, i. 178.

ⁿ See Vitruvius, lib. ii. c. 9, de Ma-

vere Puteolano.

CONSTRUCTION °.—OPUS QUADRATUM.

This is the earliest kind of construction in stone, and should be divided into several periods. The stones are squared but not necessarily square, they are usually oblong, and in the earliest examples these large stones are laid alternately lengthwise and crosswise like the modern bricks, called Flemish bricks, generally used in England.

The earliest and best example in Rome is the wall on the Palatine, called the Wall of Romulus, which is decidedly of Etruscan character, the same as the walls of Fiesole, of Perugia, Cortona, Volterra, and other Etruscan cities, where the material is the same. But this character is not confined to the Etruscan cities, it is the construction of that period, it is found equally in the Latin cities, with slight variation, as at Alba Longa, in the walls of the Arx, and at Gabii, and many other parts of Italy, far away from Etruria. It belongs generally to an early period, but not by any means always; it depends more on the material, and the quarries that the stone comes from, than anything else.

In the temple of Solomon at Jerusalem, the earliest building of the kind of which we have any record, the walls were of large blocks of stone, very similar to those of the walls of the kings at Rome, only larger, and as a general rule the older a wall is the larger the stones are; but this must of course depend on the building material. All the ornamentations were of cedar-wood and bronze (as will be seen by the following extracts):—

“And Solomon had threescore and ten thousand that bare burdens, and fourscore thousand hewers in the mountains; beside the chief of Solomon’s officers which were over the work, three thousand and three hundred, which ruled over the people that wrought in the work. And the king commanded, and they brought great stones, costly stones, and hewed stones, to lay the foundation of the house. And Solomon’s builders and Hiram’s builders did hew them, and the stone-squarers: so they prepared timber and stones to build the house. . . . And the house which king Solomon built for the Lord, the length thereof was threescore cubits (90 feet), and the breadth thereof twenty cubits (30 feet), and the height thereof thirty cubits (45 feet). And the porch before the temple of the house, twenty cubits was the length thereof, according to the breadth of the house; and ten cubits was the breadth thereof before the house. And for the house he made windows of narrow lights. And against the walls of the house he built chambers round about, both of the temple and of the oracle: and he made chambers round about: the nethermost chamber was five cubits broad, and the middle was six cubits broad, and the third was seven cubits broad: for without in the wall of the house he made narrowed rests round about, that the beams should not be fastened in the walls of the house. And the house, when it was in building, was built of

° See Vitruvius, lib. ii. c. 8, de generibus structuræ.

stone made ready before it was brought thither : so that there was neither hammer, nor axe, nor any tool of iron heard in the house, while it was in building. The door for the middle chamber was in the right side of the house : and they went up with winding stairs into the middle chamber, and out of the middle into the third. So they built the house, and finished it ; and covered the house with beams and boards of cedar. And then he built chambers against all the house, five cubits high : and they rested on the house with timber of cedar. . . . So Solomon built the house and finished it. And he built the walls of the house within with boards of cedar, both the floor of the house, and the walls and the ceiling : and he covered them on the inside with wood, and covered the floor of the house with planks of fir. And he built twenty cubits on the sides of the house, both the floor and the walls with boards of cedar : he even built them for it within, even for the oracle, even for the most holy place. And the house, that is, the temple before it, was forty cubits long. And the cedar of the house within was carved with knobs and open flowers : all was cedar, *there was no stone seen*^p."

"He built also the house of the forest of Lebanon ; the length thereof was an hundred cubits, and the breadth thereof fifty cubits, and the height thereof thirty cubits, upon four rows of cedar pillars, with cedar beams upon the pillars. And it was covered with cedar above upon the beams, and [the covering or ceiling] lay on forty-five pillars, fifteen in a row. And there were windows in three rows, and light was against light in three ranks. And all the doors and posts were square, with the windows. And he made a porch [*porticus*] of pillars ; the length thereof was fifty cubits, and the breadth thereof thirty cubits : and the porch [*porticus*] was before them : and the other pillars and the thick beams were before them. Then he made a porch for the throne where he might judge, even the porch of judgment : and it was covered with cedar from one side of the floor to the other. And his house where he dwelt had another court within the porch, which was of the like work. Solomon made also an house for Pharaoh's daughter, whom he had taken to wife, like unto this porch. All these were of costly stones, according to the measures of hewed stones, sawed with saws, within and without, even from the foundation unto the coping, and so on the outside, toward the great court. And the foundation was of costly stones, even great stones, stones of ten cubits [7 ft. 6 in.], and stones of eight cubits [6 ft.]. And above were costly stones, after the measures of hewed stones and cedars. And the great court round about was with three rows of hewed stones, and a row of cedar beams, both for the inner court of the house of the Lord, and for the porch of the house. And king Solomon sent and fetched Hiram out of Tyre. He was a widow's son of the tribe of Naphtali, and his father was a man of Tyre, a worker in brass [bronze] : and he was filled with wisdom and understanding, and cunning to work all works in brass. And he came to king Solomon, and wrought all his [metal] work^q."

There is little doubt that in the time of the Kings of Rome the fashion of building was much the same as in the time of King Solomon. The stone walls were not intended to be seen ; all the ornamentation was of wood and bronze, and has consequently disappeared. There is no reason to suppose that there were any other stone buildings within the walls beside a few temples, and the walls

^p 1 Kings v., vi.

^q 1 Kings vii.

of these were of the same plain massive style as the walls of the city. Even in the Tabularium, part of which belongs to a later period, though very much in the style of the Kings, there is no attempt at ornamental stone-work. Carving stone or sculpture for decoration belongs to a later stage of civilization. The same is observed in all countries; it is not so much a question of date as of the degree of civilization. Wood-carving belongs to a much earlier stage, the earliest stone-carving is always shallow, and is generally in imitation of wood or of wicker-work; this metal ornamentation was also at a later period imitated in marble.

In Rome the only material for these early walls is tufa. The stones of this earliest mode of construction are also the largest; as time goes on they gradually become smaller. In the very early walls also the stones are split off the rock with wedges, and not cut with any iron tool. The stones are put together without mortar or cement of any kind, and are supported by their own weight only. This earliest style is believed to have been continued for about a century after the foundation of Rome^r.

The influence of the quarry over the construction is shewn very remarkably in the case of Baalbec (No. 6 of the Photographs of the Palestine Fund), where a block of stone, of immense size, remains in the quarry within sight of the Temple, and at once accounts for the large stones used in that construction, which is Roman, and not very early, probably from its rich character of the third century of the Empire. Other buildings in Palestine of this construction, shewn in the same excellent and valuable series of photographs, belong also to the time of the Roman Empire, such as the Wall of Hebron (122). In Ireland, fabulous dates are given to some buildings of this construction, called Cyclopean, where almost invariably the quarries are within sight, on the cliffs by the side of the valleys in which the buildings stand; such massive stones were placed upon a number of wooden rollers, and pushed along to the place where they were wanted, but they were too heavy to be pushed far. Large blocks of

^r This kind of masonry is sometimes called Cyclopean. In walls of an earlier period the stones are sometimes larger than those of the Kings of Rome, as in Palestine in the walls of the earlier kings of Israel and Judah. But the size of the stones, as well as the use of this kind of construction, depends greatly on the nature of the building material; some kinds of stone, such as tufa, split naturally into large oblong blocks in the cliffs themselves and in the quarries,

other kinds split into smaller stones, and again other kinds of stone will only split into polygonal blocks. Good examples of it may be seen in several of the photographs published for the Palestine Exploration Fund, as the Wall of Wailing at Jerusalem (519), where the stones are of the large size called Cyclopean; but this is a very vague term, and is applied also to another kind of masonry with polygonal stones.

marble always were and still are pushed along in the same manner from the Marmorata, the wharf for landing marble in Rome.

The large stones were originally held together with clamps of metal, or dovetailed with bolts of wood let in between two stones, as in the Aqueduct of Claudius, and in the great Wall of the Forum of Augustus, where they are of wood only. In the great Wall of Servius Tullius they are of iron, in the form of clamps clasping the edges of the stone together. In the Colosseum they were iron rivets or clamps also, which when they rusted split the stone, and fell out, or were torn out, as some say. In the Pantheon they were of bronze.

The next division differs but slightly from it, the only difference is that the stones are smaller and not exclusively of tufa; the peperino from Albano now comes into use. The Gabii stone (*Lapis Gabinus*) is very similar to peperino, and was introduced about the same time. The upper bed of tufa in the Campagna of Rome is also frequently hard and rough, and very much like peperino. The earliest example after the Wall of Romulus is perhaps the Wall of the time of the Kings on the Aventine, sometimes attributed to the Latins^s, when they first settled on this hill, but a great part of that wall has been rebuilt and altered. In the Wall of the Kings, under the church of S. Anastasia on the Palatine by the side of the Circus Maximus, the construction is of better character, the stones are cut with the saw and closely fitted together. This belonged to the Pulvinarium, or stone gallery for the Patricians, built by Tarquinius Priscus (A.U.C. 149). In that of Servius Tullius on the Viminal (A.U.C. 189) iron clamps were used to fasten the stones together, which at once indicate a later period. The lower chamber of the Mamertine Prison, (called *Robur Tullianum*), is similar to that of his *agger*, but no iron clamps have been found in it, and there is a round arch which appears to be original. In the *Pulchrum Littus* on the bank of the Tiber (A.U.C. 220) the stones are better worked, and more closely fitted. In the time of the Republic, the mass of the wall is almost always of rubble, though it is sometimes faced with the large tufa blocks. Portions of the old walls of the time of the Kings remain against the cliffs of all the hills in Rome. These belong to the second division of the Etruscan style of construction, the stones being gradually smaller as the buildings are later. In the later buildings of this style the stones are cut, and not merely split.

^s This wall was excavated, in 1871, down to the ledge of the tufa-rock on which it stands. It is fifty feet high and twelve feet thick; the original

parts are entirely of the large oblong blocks; the parts that have been rebuilt are of concrete, faced only with the large blocks.

The same style is continued in the early part of the Republic. The substructure of the Tabularium on the Capitol is a fine example; this is of two periods, the eastern end is considerably later than the western. In the time of Camillus, after the capture of Veii, there is a marked improvement in the art of building; the stones are well cut with the saw, and closely fitted together, as in the triple arch at the mouth^t of the Cloaca Maxima, on the bank of the Tiber, *inserted* in the *Pulchrum Littus*. It is of a different stone, (apparently the Gabii stone).

The earliest temple in Rome, judging by the construction, is the one excavated in 1871, on the west corner of the Palatine Hill, behind the wall of Romulus; the construction is nearly the same as that wall. The early temples are of stone and of *Opus Quadratum* only. In the ruins of a temple at the top of the Tarpeian rock (now in the garden of the Prussian Embassy) the stones are not so large, they seem to belong to a temple of the time of the later Kings.

The three temples in the Forum Olitorium, now in the church of S. Nicolas in Carcere, both in the crypt and in the walls, and on the roof, all belong to this style, though not all exactly of the same date. The earliest is just before the time of the Republic, that of Spes, founded in A.U.C. 229, and the original foundation and substructure remain. It was rebuilt A.U.C. 492, and in the upper part of the wall work of that rebuilding also remains; the foundations were not rebuilt. Those of Juno Sospita, built A.U.C. 559, and Pietas, A.U.C. 573, are of later character, though still of *Opus Quadratum*, and of the kinds of stone generally used in the earlier period, tufa, peperino, or Gabina. Marble was not introduced until just after this period; the earliest mention of it is about a hundred-and-fifty years before the Christian era, or twenty years after the last of these three temples.

The arcades of the earliest aqueducts, the Appia and the Marcia, are of the same style; that of the Claudia is of later character, though still of large stones, and looking a good deal like the earlier ones at first sight. This mode of construction continued for a long period, and to a certain extent continues still where similar building material is found. The material of the country was always used for these great arcades, the stone was not brought from a distance

^t The arches in the inner part of the Cloaca Maxima (where visible, near S. Georgio in Velabro) *appear* also to be original, and the construction is the same. The German school of antiquaries does not admit that the arch

was used so early, but the existing remains do not agree with their theory. Not only the Cloaca Maxima, but the passage from one part of the Mamertine Prison to another, has stone arches and vaults.

where it could be had nearer at hand, so that different parts are of different kinds of stone. Tufa splits naturally in the cliffs, or quarries, into masses similar to those used in the earliest construction, and requires only to have wedges driven in to separate these blocks entirely from the rock. We must not, therefore, conclude that buildings of this early construction are always of the same early date everywhere. In Rome, the stones of the earliest walls are four feet long, two feet wide, and the same in thickness, so that each stone is a double square or cube. These early walls are constantly built upon, or built against, in later times, by walls of the Republic or of the Empire, and we are therefore driven back to the time of the Kings for these early substructures. But we must always pay attention to the history and the circumstances in each case, before we can decide upon the age. Where the building material is different, the construction of a wall is necessarily different also.

The great high wall that encloses the eastern side of the Forum of Augustus is also very plain, and is an adaptation of that part of the great wall of the city in the time of the Kings, altered in the time of Augustus, and not an actual new building of that time : the blocks are very large ; in the upper part and on the surface the edges are chamfered off, forming what is called Rustic-work. This great wall of tufa, in the Etruscan style, 50 ft. high and 12 ft. thick, is usually attributed to the time of Augustus, and supposed to have been built to inclose his forum, but there seems to have been no object for building such a wall for that purpose, although being found there it might naturally be so used. The cornices of this wall of travertine, and of other walls of the time of Augustus, in the early part of his long reign, consist of a plain square band projecting from the face of the wall, as simple as possible. There are also plain square bands or string-courses of travertine at intervals in this high wall, inserted in the great mass of tufa, and the large blocks have their edges chamfered off.

The arch, or gate, called the *Arco di Pantano*, is of the Gabii stone called "Sperone," inserted in this massive wall of tufa. The wall which separates the Forum of Augustus from the Forum Transitorium of Nerva is of travertine, inserted in the lower part of the high wall of tufa before-mentioned, at its eastern end, and at about a third of its height. This is now behind the houses opposite to the remains of the Temple of Pallas, and near the "Torre de' Conti," which is built upon part of a great wall of tufa, at one of the angles.

This at all events can never have been faced with marble, but

another old wall near to it, on the opposite side of the street, in the Forum Transitorium, in the part that is visible, has been faced or veneered with marble, and a marble cornice built upon it with the marble columns of the temple in front of it. This has been done in the time of Nerva, preserving the old stone wall, with the arch of a gate in it, originally concealed behind the marble casing, and only brought to light by the removal of the marble slabs to make the fountain on the Janiculum in the sixteenth century. The massive tufa wall continues under the backs of the houses all along this street as far as the Torre dei Conti, which is built upon an angle of it. That part of the arcade of the aqueduct of Claudius which is near the Porta Maggiore is of cut stone, with the edges chamfered off, resembling Rustic-work. Stone continued to be used side by side with brick during the first and second centuries.

The ancient wall on the Aventine, called the Wall of the Latins, also has the edges chamfered off, and there is no reason to suppose that it is an alteration ; this practice appears therefore to be a very early one, but it does not belong to the earliest period. It may be considered rather as marking a third period ; in the earliest the stones are roughly worked, and the joints are wide, sometimes wide enough to insert a stick or an arm, and without cement, as in the Wall of Romulus on the Palatine. In the second point the stones are cut with the saw, and closely fitted together, as in the wall of the Circus Maximus under S. Anastasia, and in the eastern end of the Tabularium. The chamfered edges would seem to belong to a third period originally, but these different modes of construction often continued to be used simultaneously for a time ; the edges were sometimes chamfered off and sometimes not, perhaps this was done only when they were intended to be seen.

POLYGONAL MASONRY.

Called also Cyclopean, Phœnician, and Pelasgic.

There is a construction of stones of polygonal irregular forms, closely fitted together without cement, but with small splinters of stone wedged into the joints when necessary. This construction is common in some districts, and is sometimes perhaps contemporaneous with the walls of the Kings, and is called by some authors Cyclopean, by others Phœnician^u, and by others Pelasgic; but there is great confusion in the use of these terms, and no three writers agree in the application of them. Cyclopean is the name frequently given to walls built of the large oblong blocks of the oldest Etruscan cities, before the time of the Kings of Rome, but this again depends greatly on the nature of the building-material. This construction also is of all periods, where that sort of building-material is found. In many districts, this material is the hard mountain limestone. In Rome, it is the silex or lava, and this construction is very rare there; a small portion on the Viminal is, I believe, the only example known in Rome^x.

A very learned work on the subject of Cyclopean masonry was prepared in 1802, by M. Petit Radel, a distinguished member of the French Institute. It was published in 1841, from his manuscripts after his death^y. He gives this name to the masonry in polygonal blocks, and considers this mode of construction as Pelasgic, and of the highest antiquity, as it undoubtedly is in some instances. He spared no pains in his researches, and found many examples of walls of this construction in eastern cities, with Roman walls of oblong blocks built upon them. His work attracted much at-

^u The story of "Phœnician" remains in Ireland rests on a mistranslation of the Celtic word, *fene*, which only means "warrior"—hence "Fenians."

^x It is common in some parts of Ireland, and I have had a photograph of this peculiar construction sent to me from Ireland as *undoubtedly Phœnician*. This photograph I happened to receive at Hawarden Castle, where the old castle of the time of Edward the First of England has a portion of the keep of exactly the same construction; and I have seen the same construction used in railway-cuttings to keep up the earth, at the foot of the Alps, where the same

material happened to be found within the last few years. This shews that we cannot depend upon rude natural construction *alone* for the date of a building. In such cases we must have historical evidence. It was sometimes used by the Etruscans, and other ancient nations, where this building-material is found.

^y "Recherches sur les Monuments Cyclopéens, et Description de la Collection des Modèles en relief composant la Galerie Pélasgique de la Bibliothèque Mazarine." Par L. C. F. Petit-Radel. Paris, 1841. 8vo.

tention in France, and he formed a collection of models of these old walls in the Mazarine Library at the Institute in Paris. A large part of his volume consists of a full description of these models. But he did not observe that this is the natural construction of some particular kinds of stone, and is therefore the cheapest where that sort of building-material is found, and for this reason it was used at all periods, and is used still in those districts where such materials are found. He does not observe that the pavement of the streets of Rome of the time of the early Empire, and the streets at Florence at the present time, are constructed in this manner of polygonal blocks fitted closely together without cement. The same construction occurs in walls of castles of the time of Edward I. and II., in those parts of England and Wales where this kind of stone is found; it is also in daily use in walls of all kinds in various parts of the world at the present time, in walls of farm-yards and of fields near Rome, but on the opposite side of the river Anio. This material does not occur on the Roman side of that river, and therefore this construction is not found in Rome, or very rarely. It is also abundant in some parts of Ireland, both in the old round towers of the eleventh or twelfth century, and in modern walls. It is equally common in some parts of France, in walls of all periods. It is therefore *in itself* no evidence of date, and the use of it is rather a geological than an archæological question. Such walls may be of any antiquity, from the time that walls were first built in such districts to the present time.

OPUS INCERTUM.

Another mode of construction, almost resembling this, is that called by Vitruvius² *Opus Incertum* and *Opus Antiquum*, but in this small polygonal stones are set in lime-mortar; and this brings us to another period. When lime-mortar was first used is a very difficult and doubtful question, but it was not brought into general use in Rome until two or three centuries before the Christian era, and,

² Vitruvius, lib. ii. c. 8, de generibus structuræ. "Structurarum genera sunt hæc; Reticulatum quod nunc omnes utuntur, et Antiquum, quod incertum dicitur." He applies this term to the surface, the *visible* constructions only; he does not describe the interior mass of the wall, which the Romans called *farsura*, *fartura*, *fartura*, or the stuffing of the wall, and which the English call rubble or concrete, the French *en béton*, and the Italians *a sacco*,

but the great mass of the walls of the Empire is almost always built in this manner. The Roman concrete walls are sometimes of enormous thickness, especially at an early date. In the great tomb or mausoleum of Cecilia Metella (B.C. 103) they are thirty feet thick, faced with travertine and lined with brick. In the mausoleum of Augustus and in that of Hadrian they are not less, but have passages left in them.

when first introduced, it was used in profusion and in excess. The advantages of it were very great; walls could be built of rough stone without the time and trouble required for cutting it, and be as strong and as durable as the best wall of cut stone.

CONCRETE.

The earliest example remaining of this mode of construction, usually called concrete, is believed to be the lofty wall on the Palatine Hill, by the side of the Wall of Romulus. This is extremely rude; there is no attempt at ornamenting the surface; at a distance indeed it has rather the appearance of being panelled; but on a closer inspection, this appearance is found to arise from a number of large vertical and horizontal grooves, where beams of wood have been inserted originally to support the wall and the cliff behind it, before the lime-grouting had set, which indicates that the builders at that time were not accustomed to the material and had no confidence in the strength of such a wall. The wood has decayed centuries ago, and has left only the grooves in which the beams were placed; the wall will stand as long as the hill behind it, if left alone.

This mode of constructing concrete walls with beams of timber let in to strengthen them was long continued for foundation walls^a. It avoids the bad effect of the settlement which always takes place when the water evaporates which had been used in the lime-grouting, and it is used for foundation-walls still. Some persons consider that this lofty wall against the cliff of the Palatine was merely a foundation-wall of one of the series of magnificent terraces of the Cæsars, against the sides of the Palatine, and that such a wall may be of any period. This might be true; but to suppose that a wall built against the upper cliff of the hill, was only the foundation of a great brick terrace, seems to be going rather too far in the ideas of the magnificent structures of the Cæsars. If the wall had been against any of the lower cliffs, belonging to the lower terraces, or the zigzag roads, this theory might be allowed to be true; but looking at the actual situation of it on the summit of the hill, this does not seem probable. The Cæsars used this wall, as they did the Wall of

^a Timber is always used to support concrete or rubble walls before the lime has set, but in modern buildings the timber is not left to rot in the grooves it has made. In these ancient walls the timber was left to rot, and remains of it are visible in several places in Rome in subterranean walls, as in the wall of

this kind under S. Anastasia, not far from the lofty wall against the northern cliff of the Palatine. Such walls are usually faced with brick or marble, and it is only when the veneering has been stripped off that we can see the original construction.

Romulus, to support the back of their upper terrace ; but they did not build either the one or the other, they may have faced both with brick, and the bricks have been carried away for building-material.

The introduction of lime-mortar, and its use in concrete walls, soon produced quite a revolution in the art of building ; the earliest *dated* example of the use of lime-mortar in Rome is believed to be the Emporium on the bank of the Tiber, B.C. 175, and the construction marks an early period in this kind of the art of building, but not the earliest^b. The surface of the wall is faced with a rude kind of reticulated-work, or net-work already mentioned as the *Opus Incertum* of Vitruvius. The mass of the wall is concrete of rough stone and mortar, but the rough surface is not allowed to appear. It is faced with this sort of rude reticulated-work on the surface, with arches and corners of cut stone of tufa, in pieces rather larger than modern bricks. From this time forward the mass of a Roman wall is almost always of concrete, though generally faced with reticulated-work in the time of the early Empire, or with brick, then and at all times. Concrete, once introduced, was so evidently convenient and economical, that its use soon became universal, and it has never been discontinued.

The reason that the Roman walls are so durable is, that they are built of concrete, and the lime was burnt on the spot, and used quite fresh. Every hour that lime is kept it loses some of its strength. It absorbs moisture from the atmosphere, which causes it to expand and crystallize with wonderful rapidity, and after that crystallization has taken place its binding power is gone. The more rough the material that it has to combine with and bind together, the stronger is the concrete. The circumstance of the Romans having the advantage of the rough and gritty Pozzolana sand, and of broken bricks to combine with the lime, made their walls so durable.

Lime-mortar is sometimes said to have been a Greek invention ; it was not brought into use in Rome until after the time of Camillus, the capture of Veii and the subjection of Etruria. It has been generally said by travellers that it is not found in the ancient temples of Egypt^c.

^b A part of the great early wall on the Aventine, which has been called "the Wall of the Latins," is of concrete faced with large blocks of tufa. This is supposed to have been an alteration of the time of Hannibal, B.C. 217, when he had defeated the Romans and threatened Rome. Forts were then built to protect the gates of the city, of which this was one. The other

part of this wall is of squared stones throughout, it is twelve feet thick and fifty feet high.

^c Lime-mortar is found in the Pyramids of Egypt, so that its use was known long before it was applied to the building of walls of rough stone, called rubble or concrete walls.

Professor Donaldson and Mr. Greville Chester have brought lime-mortar from

It is not found in the Grecian temples, nor in the temples at Pæstum, which are contemporaneous with the time of the early Republic at Rome^d. It occurs in the concrete wall that encloses the temples at Pæstum, but that is Roman, and of much later date than the temples. It enclosed the city, the houses of which must have been of wood only, as there are no vestiges of them. Before the use of lime-mortar it was difficult to build a habitable house of stone, and bricks were a subsequent invention, for the use of which lime-mortar was almost indispensable. The early inhabitants of the earth lived either in caves, or in wooden huts.

There is reason to believe that the Romans were the best military engineers of their day, and owed a great deal of their rapid progress and their power to that cause. Their soldiers could construct a camp, so as to make it secure, in a single night in case of need; and after the introduction of lime-mortar and concrete walls, they could soon convert an entrenched camp into a permanent castle. Their language makes no distinction between a camp and a castle; both were *castra*, and whether it was permanent or temporary depended upon circumstances; so that in reading ancient authors it is often difficult to tell whether a temporary camp or a permanent castle is meant.

When limestone was ready at hand, for an army to make lime-kilns, burn some of the stone into lime, and pile up the rest in horizontal lines between boards, into which the lime-grouting could be poured and the whole bound together into an everlasting concrete wall, would be an affair of a few days or a few weeks only. Concrete was so convenient for military purposes, that it was always used where the materials were found^e, and in some cases the military engineers had more confidence in it than they had in stone^f.

the interior of the great pyramid in Egypt, but it is not visible on the surface of these or of the temples. It occurs in that part of the wall on the Aventine Hill, called the Wall of the Latins, which has been rebuilt, but it is not found in the wall of Servius Tullius. Although probably not a Roman invention, concrete was very soon introduced by them, and brought into common use.

^d Posidonia, called by the Romans Pæstum, was a colony of Sybaris; it was occupied by the Lucanians B.C. 390. The Romans made it a colony in B.C. 273, and built an aqueduct, an amphitheatre, and a basilica, and enclosed the whole with a wall of very different construction from the temples.

The houses were probably of wood, as most of those in Rome were down to the time of Nero.

• The Roman concrete walls in Egypt are built of fragments of old Egyptian temples, and this observation applies to many other places, where broken fragments of earlier buildings were used as building-material by the Romans.

^f A singular instance of this occurs in the Castle of Carcassonne, in the south of France, built in the thirteenth century, where the walls of the castle are built of stone, but the lintels of the doors are made of concrete, cast in wooden boxes of the size required, the artificial concrete being considered stronger than the natural stone. In one or two instances the concrete there has

Concrete in masses is always liable to split in the settlement ; but, after the settlement has once taken place, the split goes no further, although it often looks dangerous. Many a strong old wall has been destroyed by an ignorant architect, or builder, because it *looked* dangerous, after it had stood for centuries with the splits in it. The surfaces of these concrete walls in Rome were faced with reticulated-work, set in frames of bricks, in buildings of the time of Augustus, and throughout the first century down to the time of Hadrian. In the latter days of the Republic, blocks of tufa of the shape of modern bricks, but rather larger, are used to form a framework to the reticulated-work, or net-work. These blocks are wedge-shaped at the back. The small blocks are driven into the concrete while it is wet before the lime has set, and the whole wall, including the smooth surface, is thus bound together. Some of the finest walls in the world are formed in this manner, and they are as durable as most kinds of stone, or as natural concrete rocks, (see *Opus Reticulatum*).

Many of these massive concrete walls of the time of the Republic and of the Early Empire, whether intended to be faced with marble or not, are built hollow, a space about two feet wide, and the same height as the apartment to which the wall belongs, being left in the wall. The chief object of this arrangement seems to have been to keep the inner part of the wall dry. Such massive concrete walls were very frequently built up against cliffs, consequently the moisture from the earth behind would penetrate through the wall if this precaution were not taken. There is a good example of this in the wall of a house of the time of the Republic, probably about the time of Sylla, built up against the northern cliff of the Viminal Hill, which was shewn more clearly in the excavations made there in 1871. The same arrangement may be seen in the wall of the *exhedra* (or hemi-circle of seats), to view the Ludus Magnus, against the cliff of the Claudium, on the eastern side of that part of the Coelian Hill. It occurs also in the great *exhedræ* of the emperors on the Palatine, to view the games in the Circus Maximus.

The fine tomb of Cæcilia Metella, B.C. 103, is of this construction for the main fabric. She was the wife of the rich Crassus, who was the first to use marble columns in a private house in Rome. Her tomb is faced with stone, an early example of the use of travertine ; it is lined with brick, but the mass of the immense walls is of concrete. Those walls are about thirty feet thick, leaving only a com-

split, but in general it remains perfectly sound, and the splits are probably ancient, caused by settlement of the

lime in the first instance, the blocks having been used quite fresh.

paratively small round opening in the centre for the chamber in which the sarcophagus is placed.

The Pantheon of Agrippa, built a few years before the Christian era, has also walls of enormous thickness, the mass of which is concrete, faced with brick, and the brick is bound together and fixed to the concrete mass by a number of arches of construction ^g.

Throughout the first three or four centuries thin layers of bricks, usually three, are introduced at intervals, to bind the surface material well into the concrete mass, and to prevent the settlement in the concrete from the shrinking of the lime as it cools and dries.

OPUS RETICULATUM.

This kind of stone net-work is often supposed to be of brick, as the small diamond-shaped blocks, and especially the oblong blocks of tufa at the corners, look very like brick at first sight; they are however of stone with a flat surface, and wedge-shaped at the back. These small wedges are placed against the surface of the rubble wall, before the grouting of mortar has set, and are so firmly fixed in it that it is impossible to draw them out. The facing bricks of the time of the early Empire are also commonly triangular, with the long flat surface outwards, and the point inwards driven into the concrete before it sets, so that the whole wall becomes one solid mass, and it is very difficult to separate the flat surface from the rough concrete mass behind it.

The celebrated wall called the "Muro torto" (because it is distorted by the giving way of the foundations) is an enormous mass of concrete, faced with net-work or *reticulated* work of early character ^h, and with the angles formed of the small blocks of tufa, before described as looking like large bricks of a grey colour. This wall has been assigned by the Roman antiquaries (on rather doubtful grounds) to the time of Sylla, or about a century before the Christian era.

^g This brickwork was intended only to give a smooth surface to the concrete wall, and to be covered with bronze plates, as we know was the case: the rich bronze casing and ornaments remaining there until the seventeenth century, in the time of the greatest barbarian of all, Barberini. What the Goths and the Vandals and the Huns and the Lombards had respected and spared, was destroyed by order of this Pope, on the false pretext of making a baldaquin for S. Peter's, in reality to make bronze

cannon for the castle of S. Angelo, to keep the Roman people in subjection to his authority.

^h The earliest *dated* examples are believed to be of the time of Sylla; in these the mortar in the joints is much thicker than in the best work of this kind, which is about a century later; it is not found in Rome after the time of Hadrian, and is usually considered as a mark of the first century of the Empire and of the Christian era.

MARBLE FACING.

Something remains to be said of the marble facingⁱ of the temples, the palaces, and the thermæ. It is a mistake to suppose that marble was commonly used as a *building-material* in the time of the Republic, or of the Empire. The core of the wall was always of stone, usually concrete, and only faced with marble, generally in slabs only, sometimes, but rarely, in square or oblong blocks. The cornice and columns are of marble, all that was visible was so, but the core of the wall of the cella was generally of stone, and the old stone cella, of very early date, sometimes remains when the ornamental part has been rebuilt. A good instance of this occurs in the church of S. Maria in Cosmedin, formerly the Temple of Mater Matuta, founded in the time of Servius Tullius (A.U.C. 175, B.C. 578), or according to some authors of Ceres (A.U.C. 306, B.C. 446), in the Forum Boarium, where the wall of the cella remains in immense masses of stone, with three apses to the choir, and aisles of the church *scooped out* of it. The marble columns have been rebuilt more than once (in A.U.C. 546 and 663). Those now built up in the wall of the church probably belong to the last date. Some of the capitals which had been destroyed were curiously imitated when the church was rebuilt in the fifteenth century.

The buildings of the early Empire are generally faced with large blocks of travertine, well cut and well fitted together, but quite plain. There is a fine example of this construction of the time of Tiberius in the "Vicolo del Ghettaarello," at the foot of the Capitol, which we have ascertained to be a part of the great Mamertine Prison rebuilt at that period. The upper part, above ground, is the only part rebuilt; the lower part, in the cellars underground, still consists of the walls of the time of the kings, built of large blocks of tufa.

The buildings of the time of Augustus continued to be still frequently quite plain, during the early part of his reign—that is, before the Christian era. The Arch of Dolabella, which is dated by an inscription upon it, A.D. 10, is of large blocks of travertine, well cut and thoroughly well built, but quite plain.

The Colosseum is faced on the exterior with cut stone (travertine), though the main structure is concrete, and the inner walls are faced with brick. There has evidently been an interruption in the work for some years; in some parts, arches begun in stone are finished in

ⁱ Travertine is considered as a kind of marble, and is used as a facing to rubble or concrete walls in the same manner.

brick. The grand arcades and corridors of stone, that form the exterior of this enormous mass of building, are built up against brickwork, with a straight vertical joint all round the building, and in many parts a space of some inches between the stone and the brick. These are evident marks of an interruption in the progress of the work, and perhaps also of the preservation of part of an earlier building of brick and of a smaller size, with the seats for seeing the *stagna maritima*, or sham sea-fights of the time of Nero.

The great lions' heads of the Etruscan style of sculpture in the port of Rome in the Tiber, made 180 years before the Christian era, are of stone, not marble. The arcades to carry the aqueducts and the bridges of about this period are entirely of stone, not marble. The walls of the Forum of Julius Cæsar, and of Augustus, are also of stone, as already mentioned. That part of the Cloaca Maxima which is of the time of Agrippa has a brick vault; his Pantheon and the remains of his thermæ are also faced with brick, originally covered with bronze plates; as has been said, the marble portico has been added at a later period^k.

The curious tomb of Eurysaces the baker is faced with travertine, and has marble sculptures. The portico of Octavia has marble columns and a marble cornice; the walls are faced with brick.

The Arch of Janus, as rebuilt for the third time, is faced with marble. The Theatre of Marcellus is of stone. The Arch of Augustus, in the Porta Tiburtina, is of stone. The Temple of Fortis Fortuna, on the Tiber, near the Forum Boarium (now near the bridge called Ponte Rotto and the house called after Cola di Rienzi), was entirely rebuilt in A.D. 15, and the existing temple (now the church of S. M. Egyptiaca) is of this period, and one of the best examples of pure Ionic in Rome; the construction is of stone well cut, with fine joints.

The walls and the shops round the Forum of Trajan are of stone: the columns of the Basilica Ulpia, in the middle of it, are of granite; the great column, and the ruins of his temple to the north of it, are faced with marble. The great Mausoleum of Hadrian was faced with marble, but the mass of the construction is of concrete, now faced with cut stone, and the incline within the outer wall is faced with brick. The fine Temple of Marcus Aurelius (now the Custom-house) has marble columns and cornice, but the main structure is of stone. It was built A.D. 170.

The round temple, called the Temple of Vesta, in the Forum Boarium, is of the same period, and is faced with marble. The mag-

^k The original brick front is partly visible behind the marble portico.

nificent Thermæ of Antoninus Caracalla were cased with marble to a great extent; this has all been stripped off for modern purposes, and we have only the brick walls, and the plaster with the marks of the marble slabs remaining, but enough remains to shew the magnificence of Rome at the beginning of the third century of the Christian era.

The Thermæ of Diocletian are of the end of that century, and marble facing has been extensively used there also, but less attention was paid to the construction of the walls and the brick facing.

The Circus of Maxentius, with the mausoleum or tomb of his son Romulus, the Arch of Constantine, the remains of his Thermæ and of his Basilica¹, although on a magnificent scale, shew a rapid decline in the arts of building and decoration.

OPUS LATERITIUM.

Brick facing to the concrete walls came into use in Rome very soon after lime-mortar, or perhaps simultaneously with it. The earliest walls with mortar are of rough stone only, and with a profusion of mortar, but they soon began to face these rough stone walls, called *concrete*, with brick to give them a smooth surface. They also, at an early period, used small blocks of tufa cut into the shape of modern bricks, but usually of rather a larger size, and these blocks continued in use for some time simultaneously with bricks. We read of bricks at a much earlier period, both sun-dried and kiln-dried, but the bricks of Babylon and other earlier cities were cemented with bitumen only, as mentioned by Herodotus, or sometimes with slime or mud, or clay, where bitumen was not to be had.

The brickwork of the first century is the finest brickwork in the world; the bricks are well baked, and made flat like tiles, and are laid flat in the walls, excepting round arches, when they are placed edgeways.

The earliest bricks are said to have been made from the mud of the Tiber (as has been mentioned). This was a natural mixture of clay and sand, and the numerous slaves of the Empire are said to have been employed in making bricks, when not otherwise occupied. These bricks are usually stamped in the centre with the name of the maker, and the owner of the property where they were

¹ Care must be taken not to confound this great hall with the church, also called the Basilica of Constantine by ecclesiastical writers, which is the one in the Lateran now called S. John's.

The use of this basilica on the Palatine corresponds more nearly to that of a law court in England; it is sometimes called the Forum Pacis, and is probably built in part of that forum.

made. There is a collection of some hundreds of these brick-stamps in the Vatican Museum^m, those of the time of Trajan and Hadrian are among the most common. The brickwork of the time of Nero and Titus is considered the best. These stamps can only be seen when the brick has been detached from the wall, which is often no very easy matter. Stamps of the time of the Antonines are the most common, only four are known of the time of Nero.

From the time of Trajan it became customary to add the names of the Consuls to that of the owner of the kiln, or of the slave who made it. A sufficient number of stamped bricks were used in each building to record its date with certainty, but after the seat of empire was transferred to Constantinople, and the decay of Rome began, this useful custom was gradually discontinued. During the time that the custom lasted, the greatest persons in the Empire, even members of the Imperial family, were not ashamed to have their names stamped on the bricks made at their kilns, which were valuable property; and the word *prædium*, which we so often meet with in the history of that period, often includes the brick-kiln, or furnace. Among the great personages, whose kilns are known by the stamps upon them, are Domitilla Lucilla, wife of Annius Verus, and mother of Marcus Aurelius Augustus, the head of the great family of Verus or Varius, which resided in the palace called the Sessorium (now the monastery of Santa Croce in Gerusalemme), for more than a century, and who built the Circus Varianus now destroyed, and the Amphitheatrum Castrense, the walls of which are still standing, having been incorporated in the walls of Romeⁿ.

Another easy test of the date of a brick wall has been found by the careful observation of Roman antiquaries. This consists in placing a foot rule or a yard measure against the wall as it stands, and counting the number of bricks in a foot or a yard, including the mortar between them. They have laid this down as a useful general rule to judge of the date of a building during the first four centuries of the Christian era.

In the first century ten bricks to the foot (mortar included); as in the Arches of Nero.

In the second century *eight*; as in the Villa of Hadrian.

In the third, *six*; as in the Wall of Aurelian.

^m There is also a selection of them in the Ashmolean Museum, Oxford.

ⁿ On the subject of these Brick-stamps, see the Appendix to this Section. In the photographs of the con-

struction of walls prepared for this work, a six-foot-rule is used, in which each alternate foot is painted black and white, so that the bricks can be measured in the photograph.

And in the fourth, *four* only ; as in the Circus of Maxentius, and the tomb of his son Romulus, adjoining to it, and as in modern brick walls.

This rule is said to apply only to walls intended to be left *visible* ; but this is doubtful ; it seems more probable that the same fashion of construction was used by the workmen of the same period, without reference to the question whether it was intended to be seen or not. It is found especially in arches, as in the aqueduct of Nero on the Cœlian, one of the best examples, and in the servants' apartments in the house of Nero on the Esquiline, where the brickwork of Nero and of Titus can be compared. This is the best period ; in earlier work we must apply nearly the same rule *reversed*. The brickwork of Agrippa at the Pantheon (B.C. 26) is not equal to that of the time of Nero and Titus, that in the tomb of Cæcilia Metella (B.C. 103) is still worse, more like that of the third century than of the first.

In the best brickwork of the time of Nero there are *usually* ten bricks to a foot, as has been said. In general, as the work is later, the bricks become thicker and more mortar is put between them. The quality of the brick is also another test, the early bricks are made harder and better, and of a finer texture than the later ones, which become more coarse and spongy in appearance. In the early work the mortar between the bricks can hardly be perceived, in the later work it is an inch thick and often more.

It has been observed in the walls of Rome that the earlier bricks are generally yellow, but no reliance can be placed upon this ; the colour of the bricks depends on the clay of which they are made. Some clay becomes red, and other clay becomes yellow in the burning, and bricks of the two colours are sometimes so intermingled that it is impossible to suppose they can belong to different periods ; the very fine brickwork mixed with reticulated-work does not occur after the time of Hadrian ; the falling off is so gradual as to be hardly perceptible, but towards the end of the second century the brickwork is not so fine as in the previous century. In the third and fourth centuries, although most important buildings were still erected, the brick walls in them are of a very inferior quality to what had gone before. The Thermæ of Antoninus Caracalla, and of Diocletian, and the grand villa of the Gordiani, called the Torre de' Schiavi, splendid buildings as they must have been, are not equal in the construction of their walls to the villas of Hadrian, or of Septimus Bassus : or the palace and arcade of Nero, or the Thermæ of Titus, or the Castra Prætoria, the Lateran, the Porta Ardeatina, all in the walls of Rome, and all

of which have the beautiful brickwork of the first century. This splendid early brickwork is called by Vitruvius *Opus Lateritium* °.

MIXED.

Another mode of construction, which occurs in many parts of the walls of Rome, and in the Circus of Maxentius, and in many other buildings, is called *mixed*, because it is a mixture of rough stone and brick in alternate layers at regular intervals. This is usually attributed to the fourth century, because of this dated example of the beginning of that century, but it occurs also at Pompeii, and in many parts of the substructure of the Wall of Aurelian, which in various places is evidently built upon an earlier construction.

This mode of construction appears to be a natural development of the mere concrete wall which forms the core or central mass of nearly all Roman walls. The alternate layers of bricks, or tiles, made it more easy of construction and more firm at once, without the liability to split, as the lime and the stones settled down, to which a great mass of concrete is always subject. This mode of cheap construction for foundations, cheap and strong at the same time, is probably as old as the time of Augustus, and continued in use long after the time of Maxentius and Constantine. It is the mode of building most commonly adopted in Roman walls in England and in Gaul. Like other cheap natural modes of building it affords in itself no evidence of date, other things must be taken into account in judging of the age of such a wall. It is known in Rome as the style of the *Decadence*, because it was much used at that period, but it may be seen also in some of the foundation walls of Hadrian's Villa near Tivoli, in parts not intended to be seen, and at Ostia in tombs of the second century.

Small pieces of tufa of the form called a parallelogram, that is, of the shape of a modern brick, are used for facing the concrete walls from the very earliest period. They occur in the Emporium, and in the Muro Torto, forming borders to the panels of reticulated work. They are often mistaken for grey bricks, but the material is found to be tufa on examination, and they are generally considerably larger than modern bricks.

° Vitruvius, lib. ii. c. 8.

OPERA SARACENESCA.

A facing resembling the preceding, but with small *square* blocks of tufa instead of the *oblong* blocks of the earlier period, continued to be used occasionally at all periods, and was extensively revived in the Middle Ages under the name of *Opera Saracenesca*. This mode of facing a wall occurs in buildings of the third and fourth centuries, as at the great villa of Septimius Bassus, called *Sette Bassi*, and in another called Mura de Francesi, near Marino. It became the most common mode of facing a wall from the ninth century to the fifteenth. It is supposed to have passed from Rome to Byzantium, and from thence into many eastern countries, and to have been largely used by the Saracens in their fortresses, and by them brought back to Rome in the ninth century, if it really ever went out of use there. It was used for the facing of the buildings of the monastery of S. Sisto Vecchio in the seventh. It was adopted very commonly for the castles and houses of the barons of the Middle Ages, as in the castle of Hildebrand in the eleventh century, long a great stronghold of the barons in the Trastevere. It occurs also in the castle of the Gaetani of the thirteenth century, around the tomb of Cæcilia Metella, and in the castle of the Savelli on the Aventine, in the thirteenth or fourteenth.

There is said to have been a great attempt at the revival of architecture and the other arts in Rome in the time of Charlemagne. Three churches were built or rebuilt at that period in Rome, S. Prassede, S. Cæcilia, and S. Maria in Domnica, all built in the first half of the ninth century, and faced with very good brickwork, but not much better than that of the seven churches built or rebuilt in the eighth century, after the damage done during the siege of the Lombards^p. The portions of the sixth and seventh centuries which remain in the churches of that period are a bad imitation of the imperial construction. The construction of the eight churches of the fifth century, of which we have considerable parts of the walls remaining, is of much better brickwork, as may be well seen at SS. Giovanni e Paolo (A.D. 417), and S. Stefano Rotondo (A.D. 461).

The mediæval churches in Rome generally are built of concrete walls faced with brick on the exterior, and plastered and painted within, and enriched with marble columns taken from the ruins of the buildings of the Empire. There are many hundreds of antique

^p Santi Quattro, SS. Sabina, John and Achilleus, Cæsarius; portions only ad Port. Lat., Prisca, Sixtus, Nereus of this period remain.

columns in Rome used again in the churches to support the clere-story walls, and for ornament.

The painting of the interior has generally been renewed from time to time, according to the taste of the age ; but the mosaic pictures in the apses, and the marble columns, have generally been respected, though not by any means always. There are several instances of marble columns being encased in square brick piers, in order to paint the surface of them, as at S. Pudentiana in the twelfth century, and this has been done in some instances in quite recent times.

In general, the brickwork of the Middle Ages in Rome^a, especially that of the twelfth century, is an imitation of that of the Empire. Walls of that period are often mistaken for walls of the Empire by very good antiquaries, if they have not given special attention to the subject of construction. One of the best living antiquaries in Rome for all church subjects assured me that the walls of Rome were entirely the work of the Popes, and pointed to their arms or their names on many parts of them, but a more careful examination of them shews that these belong to repairs of small parts of the walls only, and are generally only skin deep, a repair of the external facing of the wall only. In many instances the corridors of Aurelian remain within the new surface supplied afterwards. In those places where the wall had been battered down, or pulled down, by the Goths, an outer wall has been rebuilt for the sake of the octroi duties, and for the defence of the city, but it has never been thought necessary to rebuild the corridors in those parts. The interior of the wall, where it has been thus rebuilt, is mere rubble and rubbish, with the exception of the bastions and walls of Sangallo in the sixteenth century, which are fine fortifications of their period^r.

^a The construction of walls of the thirteenth and fourteenth centuries in Rome is very inferior to that of buildings of the same periods in England and France.

^r The brick walls of his fortifications are so extremely like those of the Wall of Aurelian in the third century, that it is often difficult to distinguish them on the exterior ; it is only by examining the plan in the interior that we see clearly they are work of the sixteenth century, not of the third. The builders appear

to have often used the old bricks. It is important to notice this, because modern authors, including even Mr. Burn in his really valuable historical work, consider the extent of the Wall of Aurelian as still an open question, whereas a single walk round *the interior* of the wall shews that there can be no possible doubt on the subject. The extent of his wall was the same as that of the present wall, with the slight exception of the bastion of Sangallo, an extension of a few yards only.

APPENDIX TO OPUS LATERITIUM, ON BRICK-STAMPS.

MANY buildings in Rome are dated to a year by the Brick-stamps found in the walls, the account of *Opus Lateritium* is therefore hardly complete without some notice of them ^s.

BRICK-STAMPS have, from an early period, been found in Rome, and in Roman structures in—though never out of—Italy; and, hence, they have been described with greater or less detail, in the works on Roman inscriptions enumerated below in a note ^t. In date, they are found generally to range between the commencement of the second century and the time of Alexander Severus, A.D. 223; but Fabretti gives a brick-stamp found near Arsoli, at the first *castellum aquæ* of the Marcian aqueduct, with the name of Augustus, AVGVST. (Inscript., c. vii. p. 501, 56). Augustus restored the Marcian aqueduct. The period between Trajan, A.D. 98, and the death of M. Aurelius in A.D. 180, is that in which they occur in the greatest abundance. Generally, the inscriptions on them are circular, sometimes in one line only,—rarely in more than two,—the outer circle being usually about four inches in diameter. In the centre occur, not unfrequently, the word *cos.* (for *consulibus*), or various devices, such as the head of Minerva helmeted, and flowers or animals, doubtless emblems or *insignia* of the potteries whence they came, or of the individual potters who made them.

The inscriptions record either, 1. The names of the Consul or Consuls of the year in which the particular brick was stamped; or, 2, its own title, *Opus Doliare*, *Opus Figlinum*, or *Opus Figlinum Doliare*; or, 3, that it was *Ex Figlinis*, from “the potteries;” or, 4, *Ex Officinâ*, from the “manufactory” of the person whose name is given; or, 5, *Ex Prædiis*, from the “properties” or “estates” whence we may presume the clay was excavated.

^s For this concise account of the Brick-stamps I am chiefly indebted to my friend W. W. Vaux, M.A., of Balliol College, Oxford.

^t Works on Roman Inscriptions in which the Brick-stamps, *Figlinarum signa*, are recorded:—Panvinus, *Fastorum*, libri v., 1558; Gruterus, *Inscript. Antiquæ*, 1602; Fabretti, *Inscript. Antiquæ*, 1699; Muratori, *Novus Thes.*

Veterum Inscriptionum, 1739; Seroux d’Agincourt, *Recueil des Fragmens de Sculpture en Terre Cuite*, 1814; Fea, *Frammenti di Fasti Consolari*, 1820; Orelli-Henzen, *Inscriptionum Latinarum selectarum amplissima collectio*, 1828—1856; *Bullettino ed Annali dell’ Istituto di Corrispondenza Archeologica*, passim.

On some indeed of the best-preserved and most interesting of these small monuments, all the above particulars may be seen in a contracted form. Among the names of the *Consuls* recorded are many otherwise well known, and a few also of whom we have no mention elsewhere, a fact which has led some scholars to think that these names represent only *Consules Suffecti*. Fabretti states that he found these most valuable to him in his researches, and that he was able by their aid to re-construct and to determine, with certainty, some portions of the *Fasti Consulares*. Were all that have been collected in Rome and elsewhere minutely studied, as from their importance they well deserve to be, great light would be thrown on the real origin of many buildings, the exact date or authorship of which is at present, to say the least, conjectural. Besides the names of the Consuls, we find also the names of more than one Emperor and Empress,—but these of course do not limit the period of the manufacture of these stamps, as do those of the Consuls, to a single year,—and occasionally, though very rarely, the name of the building, in the construction of which they were to be used.

A few words as to the meaning of the words *doliare*, *figlinum*, and *prædia* will be useful. *Doliare* comes from *dolium*, the vessel in which it was usual to put wine before it was finally stored in the *amphora*, or *cadus*, and this was made of pottery or earthenware (κέραμος); hence Seneca says, “Vinum non pati ætatem quod in dolio placuit” (Sen., Ep. 36); and Propertius, “Dolia Virgineis idem ille repleverit urnis,” (ii. 169.) And Juvenal alludes to the same fact when speaking of Alexander and the cask of Diogenes^u, (xiv. 311). So *servus dolearius*, (ap. Gruter, 583, 1,) is the slave who stowed the *dolia* in the cellars: hence, *opus doliare* came to mean generally “potter’s work.” *Figlinum* in like manner comes from *figulus*, or *figulinus*, who is the “potter,” (κεράμευς). Thus Pliny^x says of Dibutades of Sicyon, that he “figulus primus invenit ex argilla fingere similitudines;” and Juvenal, speaking of the death of Alexander after he had taken Babylon, the city of the “Muri coctiles:” “Cum tamen a figulis munitam intraverit urbem Sarcophago contentus erit,” (x. 171.)

It appears, further, from an inscription found at Spalatro, that there was even a *collegium figulorum*. The *figulinus*, or maker of the smaller bricks, seems to have been distinguished from the *figularius*, who made the flat tiles and *imbrices* for buildings, and hence was sometimes called *figulus sigillator*, the “seal or stamp-maker.”

^u “Sensit Alexander, testâ cum vidit in illâ Magnum habitatorem.”

^x Plin., xxxv. 12, 43.

Officina was simply the spot where the works were executed, (*ἐργαστήριον*).

About the meaning of *prædia* there has been some dispute, but a careful examination of the authorities will shew that while *prædium* sometimes means the whole of a man's possessions, which *fundus* never does, it is usually contrasted with *fundus*, as meaning the city property as opposed to the farm, or country estates.

Thus Cicero, speaking of Verres, says, "Habet in nummis, habet in Urbanis prædiis," (c. 86); again, "pro Roscio," "nunc in prædia rustica relegarat;" and Martial, "Deseris urbanas, tua prædia, Pontice, lites," (xii. 72). On these Brick-stamps, *prædia* may mean either the one or the other, in that it means *specifically*, the spot whence the clay was procured; but in these cases it refers to the estates belonging to the Imperial family, whose names are given, rather than to others. Some are probably named from the locality in which they were situated. Thus the *Prædium Salarium* was most likely along the Via Salaria, (the great salt road,) which leads from Rome to Picenum.

The names of the potters are generally, as we should expect, *servile*; the proprietors of many, if not of all, the *officinæ*, having been freedmen, and their under-workers therefore necessarily slaves, and this is clear from the *number* of names attached to different *dolia*; as freedmen, like Sextius Attius Silvanus, were entitled to more than one name, while the slaves have only one, as *Tertius*, *Modestus*, &c., and were also, in a great many instances, Greek, or of Greek extraction. Lastly, when there are contractions, such as A. A., or N. N., we may be sure that these are not earlier than M. Aurelius or Verus.

In point of form these Brick-stamps fall into two well-marked divisions; either they are circular, which is the case with by far the largest number, or they are stamped within an oblong parallelogram. They also occur in two distinct colours, either of a pale yellow hue, or in different shades, from a pale to a bright red.

These are Brick-stamps of Domitianus, c. A.D. 90, in the work of Fabretti :—

Inscript., c. vii. p. 501, 61.

EX . FIG . DOMITIANIS . AVG . or . MAIOR .

Ex figlinis Domitianis minoribus vel maioribus.

OPVS . DOLIARE . EX . PRED .

DOMITIANI . AVGVsti.

aper.

EX . OF . DOMITIANA .

Ex officina Domitiana.

(Inscript., p. 501, 69,) Trajan, (A.D. 101):—

L . BRVTTIDI . AVGVSTALIS . FIG . OP . DO

Sextus Articuleius Paetus was Consul with Trajan.

EX . FIG . OC . M . CAE . N . PAET .

COS.

HAST . VOP . COS *

P. N. Hasta and P. M. Vopiscus, Cos., A.D. 114.

The Consuls of the time of Hadrian are C. Ventidius Apronianus et Q. Arrius Paetinus, (A.D. 123):—

APR . ET . PAET . COS . or PAET . ET . APRONIANO . COS .

M. Helius Glabrio et C. Bellicius Torquatus, Cos., A.D. 124:—

EX . PRAED . ARRIAE . FADILLAE . CAEPIONIAN

GLABRION . ET . TORQUAT

COS

D.

Q. Fabius Catullinus et M. Flavius Afer, (A.D. 130):—

CATVLLINO . ET . AFRO . COS .

C. J. S. U. Servianus III. et C. V. J. Varus, (A.D. 134):—

SERVIANO . III . ET . VARO . COS .

Et Lucius Ælius Cæsar with P. Cælius Balbinus, (A.D. 137):—

L . AEL . CAES . ET . BALBINO . COS .

COMMODO . ET . LATERANO . COS.*

L. Ælius Aurelius Commodus and T. Sextius Lateranus,
Cos., A.D. 154.

EX . PRAEDIS . L. VERI . AVG—. *

Lucius Verus died A.D. 169: we can have no doubt, therefore, that this stamp is to be assigned to the period between A.D. 161, when he was associated in the Empire with M. Aurelius, and his death in A.D. 169.

EX. FIGLI. AR. FA*

O. D. FAD . . . &c.*

These bricks refer to Arria Fadilla; but about this Fadilla there is a little doubt whether she be L. Aurelia Fadilla, a daughter of Antoninus Pius and Faustina, or a daughter of M. Aurelius and of the younger Faustina.

* In the Ashmolean Collection in Oxford.

POLYGONAL MASONRY. (p. 11.)

IN the "Handbook of Central Italy," by Octavian Blewitt, published by John Murray in 1850, there is an excellent account of the polygonal masonry in various parts of the world, apparently taken largely from personal observation. He calls it *Pelasgic*. His description of this mode of construction is so good, and so well suited for the purpose here, that I cannot forbear extracting it:—

"The style of their construction was almost invariably polygonal, consisting of enormous blocks of stone, the angles of one exactly corresponding with those of the adjoining masses. They were put together without cement, and so accurately as to leave no interstices whatever. This style may be traced throughout Greece, Asia Minor, and all the countries which history describes as colonised by the Pelasgic tribes. The only exceptions to the polygonal style are where the formation of the country presented a calcareous stone, occurring naturally in parallel strata, and obviously suggesting the horizontal mode of construction. Another variety was produced by local circumstances in the neighbourhood of Rome, where tufa is the prevailing stone. At Tusculum, for example, the softness and quality of the tufa pointed out the horizontal style; and thus, in the rare instances in which the Pelasgi were compelled to adopt tufa as their material, the blocks incline to parallelograms. Even here, however, where the style was evidently controlled by circumstances, the taste for the national custom may still be recognised; and we often find that the blocks have been shaped so as to deviate in many places from regular squares, and that they are sometimes cut into curves. At the ruins of Ampiglione, near Tivoli, the supposed site of Empulum, we have probably the most ancient example of the Pelasgic style in tufa. It is entirely polygonal, but the blocks were apparently found broken into irregular masses by their fall from the mountains, and therefore afforded peculiar facilities for this construction. Instances of this are not wanting farther south. In the wild mountain-pass, leading from the valley of Sulmona to the Piano di Cinquemiglia, in the second province of Abruzzo Ultra, we have observed in the precipitous ravines frequent examples of limestone so broken that they might almost have been called Pelasgic as they stood. We may therefore assume as a general rule, that whenever the materials which the Pelasgi employed were of hard stone, the polygonal construction was adopted in its utmost purity, and whenever the geological formation of the country presented tufa or soft calcareous stone occurring in natural horizontal strata, their style was modified accordingly, but always retained more or less the peculiar characteristics of their national architecture. The Roman kings imitated the polygonal style in all cases where the hard stone was unfavourable to the parallelograms of Etruria, and hence we find polygonal walls in many towns of Latium which are known to date from this period. Even during the Republic the polygonal construction was adopted in some of the most important works. We see it in the substructions of the Appian and other great military roads, and recognise it still more frequently in the villas around Tivoli."

” “Handbook of Central Italy,” 1830, Introduction, p. xviii.

CYCLOPEAN WALLS (see p. 11).

It is erroneous to suppose that all walls constructed with polygonal blocks are Phœnician or Pelasgic; in the Necropolis of Cnidus there are many tombs constructed in this manner, which are undoubtedly of the Græco-Roman period². The Phœnicians generally made use of squared stones of large dimensions. In the substructure of the platform of the Temple of Baalbec there are blocks which belonged to the Phœnician Temple of Baal, averaging 60 ft. in length. The Pelasgi certainly employed polygonal stones in their walls, generally of larger dimensions than those used in later times; but the manner of walling usually known under the denomination of Cyclopean is not necessarily a sign of great age. It is to be seen in many of the cities of Asia Minor, of both early and late dates; but a practised eye can easily distinguish the earlier work from later constructions.

THE USE OF THE ARCH (see p. 9) with voussoirs was not known to the Greeks of Asia Minor three centuries before Christ, or it would have been employed in the Mausoleum and other contemporary buildings. It is not met with in any purely Greek temple, but it seems to have been introduced by the Romans, as it is common in Græco-Roman buildings, in temples, theatres, gymnasia, and thermæ. It is to be found in the basement of the temple of Aizani, and in the theatres of Ephesus, Cnidus, &c. There are both pointed and semicircular arches in the walls of Assos of a much earlier period, but these are on the horizontal principle, and not with voussoirs.

MORTAR (see p. 14) was not used in the construction of Greek temples. In the temples Mr. Pullan excavated, namely, that of Apollo Smintheus in the Troad, that of Bacchus at Teos, and that of Minerva Polias at Priene, the blocks were united by iron clamps run with lead, and the drums of the columns fastened together by bronze dowels. Specimens of the clamps and dowels are to be seen in the British Museum. The beds of the stones were so exactly worked that in many cases the joints were not perceptible without close observation. In the Græco-Roman period mortar was used

² I am indebted for the greater part of the facts mentioned in this part of the Appendix to my friend Mr. Pullan, the architect, who has resided much in the East, has carried on important ex-

cavations there, and has published an excellent work on the subject. His accurate observation confirms my own in a very remarkable manner, and he has seen much more than I have.

when large masses of wall were required, but only occasionally in the temples. Mr. Pullan does not remember having seen a single instance of a concrete wall, but he has seen Greek mouldings formed of cement.

The original parts of the walls of Palestrina, or Præneste, are of this construction, especially those around the arx or citadel on the summit of the rocky promontory on which the town is built. In that part walls of the time of the early Empire and medieval walls are built upon it, so that it must be original. In the lower parts near the gate of the town there is more of the same kind of construction, but there it appears to have been rebuilt of old materials. The natural blocks of stone strewn about the hill in all directions only require to be fitted together with care to make such a wall, and this could obviously be done at any period. The same construction occurs in the walls of Spoleto and many other old towns in the neighbourhood of Rome, though not in Rome itself.

Other parts of the walls of Palestrina are in the style of the walls of the Kings in Rome, of the usual oblong blocks, but these come from a different quarry, and are not so hard as the limestone of the hill. Against the latter wall, which runs along the bottom of the town, an arcade or *porticus* of the time of Sylla has been built, and in other parts a brick wall of the time of Trajan or Hadrian is built in front of it. This wall is of considerable length, and has a series of niches for statues, having apparently belonged to *Thermæ*, made outside of the walls of the town; in other parts there are also walls of the time of Sylla and of Trajan. In front of the Palazzo Barberini is a semicircle of marble steps as if for a theatre; it is called *a temple*, but we have no example of a temple with such a flight of steps to it within a semicircle. The remains in the place below at a much lower level, where the beautiful mosaic pavement of the second century was found, are also called part of the same temple; but this seems scarcely possible, it is much more likely that the very remarkable pavement which represents Egyptian scenes, was that of a hemicycle of the *Thermæ* of Trajan. These places of public entertainment were generally of considerable extent, and the medieval town may have been built in these *Thermæ*; but to say that it is built on the site of the Temple, as is said in all the guide-books, is nonsense, we have no temples of that size anywhere.

APPENDIX TO THE HISTORICAL MODES OF CONSTRUCTION OF WALLS.

THE CAPITOLIUM, OR MUNICIPIUM ^a, &c.—INTRODUCTION.

THE chronological succession of the Construction of Walls, and the architectural details connected with them, form the foundation of the modern science of Archæology, the system of Rickman (who was the first to reduce chaos into order), as perfected by Professor Willis. In Rome this is of the greatest importance, it is the one test by which the truth or falsehood of the legendary history can be ascertained. The early history of all nations is legendary only, that is to say, it was handed down from father to son for many generations, before it was committed to writing, as the history of the family, or the tribe, or the people. The early Romans appear to have been especially careful to preserve records of their acts and their history, which were recorded on bronze plates (these were in substance not unlike our concise Saxon Chronicle, the foundation and the skeleton of the early history of England); that such bronze records were kept as early as the days of the kings of Rome, is proved by the fact that a building was erected for their preservation at that period, called the Tabularium, for the bronze plates or *tables* of the records. This was over the Ærarium or Public Treasury; the copper money for paying the army being kept in part of the same public building. This building is mentioned by Terentius Varro as one of those that were extant in his time, which were then considered to have belonged to the original city of the Sabines on the hill of Saturn, before that hill was made the Capitol of the united City. This building still exists, and the architectural character of it, the construction of the walls, and the details, are of as early character as any building in Rome, very similar to, though not identical with, the primitive fortifications on the north end of the Palatine Hill, of the character called Etruscan, which must have been also built

^a The account of this great building, called by various names, which contained the Ærarium or Treasury, the Tabularium or Record Office, and the Senaculum or Senate-house, would belong more naturally to that chapter of this work which describes Regio VIII., the Forum Romanum; but the great and important excavations that are going

on there at the present time under the Italian Government, make it expedient to keep back that part of the work, while the chapter on the Historical Construction of Walls is wanted to illustrate and prove all the other parts of the work. It is therefore introduced here as the earliest dated building in Rome.

before the union of the Roman and the Sabine cities into one, as they would be perfectly useless afterwards.

The original parts are THE ÆRARIUM on the lowest floor, a long corridor built against the scarped cliff of the hill, and divided into a series of small square chambers by partition walls, called by Varro *Parietes*, not extending quite across, but leaving a passage at the back against the rock. There is a small window in each of the chambers that is open, but parts of it are filled up with earth, and in these no windows are visible ; at the east end it is concealed and partially destroyed by a medieval tower, built upon it, and projecting beyond the face of the wall. An entrance has been made at each end, but neither is original. Below this story, which stands ten or twelve feet above the level of the ground, are two doorways, one belonging to the temple of Saturn, and blocked up by the platform of that temple, as rebuilt by Septimius Severus in the third century. The upper part of the doorway is visible, and is of early character, with a tympanum, having a round head with a flat lintel under it over the square-headed doorway, in the upper part of which a modern window has been made ; this doorway opens at the foot of the very steep stairs, to be described shortly. There is no communication from the foot of the stairs on either side, the lower part appears to be cut in the rock, and passes under the Ærarium, and then behind the Tabularium. The construction of the doorway is not so early as that of the original walls. The other doorway is buried in earth within, and concealed on the exterior by the *podium* or basement of the temple of Concord. It was open until it was walled up by Canina about 1860. In the front of the *podium* there is a doorway at the end of the passage leading to the inner door, and a window by the side of it to give light to the passage ; both of these openings were walled up by Canina.

THE TABULARIUM is also part of the original construction along the greater part of its length ; it is a long, narrow corridor over the Ærarium, with an arcade towards the Forum Romanum, originally open, and forming a *porticus*, now also walled up. The face of the wall has been cased with small square stones, probably in the time of King Theodoric, as is mentioned further on. The basements of the temples are each fourteen feet high, evidently built against the old wall ; the Ærarium is twenty feet high, and the Tabularium thirty. The rude Doric columns between the arches are twenty-seven feet long. Towards the west end of the Tabularium is another arcade, running transversely, and forming a porticus within the west front, where the modern staircase has been made. This

arcade is not original, but is not later than the time of the Republic ; it joins the old wall by a straight vertical joint, shewing that it has been built up against it. The third story over the Tabularium is eighteen feet high ; it retains the old wall in parts, in other parts it has been destroyed, when the upper stories were burnt ; these two upper stories are each twelve feet high. Behind the basement of the Temple of Concord is another ancient staircase, not steep like the former one, but made in easy gradients at the angles with a gradual ascent. This passes also behind the Tabularium, and remains of it are visible on the upper floor, the third floor from above and from below. There are five stories in all, besides the two doorways at the foot.

THE CAPITOLIUM, OR MUNICIPIUM.

This great public building on the southern slope of the Capitoline Hill, now called the Municipium, but formerly called the Capitolium, is one of great importance for the history of Construction. It is a large square building, with an open court in the middle of it of no great extent. The northern front is of the sixteenth century, and was built by Michael Angelo. This part is only three stories high, but is on the top of the hill, and forms one side of the quadrangle called Piazza del Campidoglio, the eastern and western sides of which are also public buildings, now museums ; the northern side is open to the small garden on the slope on that side and the *clivus* of Michael Angelo. But on the opposite side of the Municipium towards the Forum Romanum, of which it forms the northern side, being built on the slope, it has three other stories under the level of the three of Michael Angelo. The two upper floors are rooms for the clerks' offices, and other apartments for the use of the municipality of Rome. Under these the middle story is now used as lumber-rooms only, but parts of the walls of this story are very ancient. Under these is the Tabularium, or long gallery, which was originally open, as an arcade or *porticus*, towards the forum. Under this again is another long narrow gallery divided by partition-walls (*parietes* or *parpent* walls), that is, walls that do not go quite across the gallery, but leave space for a passage behind them, thus forming a series of small square chambers, in each of which is a small window. This is the *Ærarium* of the time of the Kings, and the Tabularium over it is of the same period. The arcade or *porticus* which forms the front of the Tabularium has long been walled up, and it is considered dangerous to re-open the arches on account of the great

weight above them, since the upper stories have been built of stone. The two upper stories are believed to have been originally of wood only, and to be the same building the burning of which is so frequently mentioned by the classical authors, Tacitus^b and others.

The lower part being considered as foundations only, its preservation was not mentioned. It has thus remained almost unaltered from the very earliest period of the history of Rome. The front towards the Forum has been refaced with small square stones at a much later period, after the time of the early Empire, probably by King Theodoric, *c.* A.D. 520, when all the public buildings were repaired, as we are told in his own letters, preserved by Cassiodorus^c. In the interior the original construction remains, the lower part has been much eaten away by salt, it having been used as a salt-warehouse in the Middle Ages; but the upper part of the wall of the Tabularium, and the whole of the interior of the Ærarium, has escaped the salt, and has not been altered, so that the original construction can there be seen. It is of the earliest architectural character of any building in Rome, quite as early as the Wall of Romulus on the Palatine. This is the identical building mentioned by Terentius Varro^d, as considered in his time to be one of the three buildings that remained of the original city or *arx* of the Sabines before the union with the Romans, when it was called the Hill of Saturn, before it was made the Capitol of the united city. The other two were the temple of Saturn in front of it, and the gate of Saturn close to the temple. Through and under the basement of this temple was the entrance to the Ærarium.

When Plutarch^e says that the public treasury of the Kings was consecrated as a temple in the early days of the Republic, he can only mean that the *porticus* of a temple, with a small cell behind it, was made over the entrance to the Treasury to consecrate it, and make it sacred in the eyes of the people. The temple was rebuilt by Septimius Severus in the third century, and the doorway behind it was walled up, a fresh entrance being made at the west end, which may be seen now also walled up (as the Ærarium has long been disused). It was a building admirably suited for its original purpose, of stowing away the copper or bronze money with which the Roman army was paid. It is also on record that in the time of the Kings the money was made in square blocks instead of round, in order that it might be stowed away in smaller space;

^b Taciti Hist., lib. i. c. 2, et lib. iii. c. 72.

^c Cassiodorus, Variorum, lib. iv. c. 30.

^d See Temple of Saturn, p. 43, note f of this Appendix.

^e Plutarch, in Publicola.

and it is easy to see that each of these small square chambers would hold a large amount of such coin. When there were strong doors in each of the openings, which now form a passage at the back against the rock, it would be as secure a place as could well be contrived.

In the lowest story of all of this great building, there are only the two doorways cut in the rock, one of which, behind the temple of Saturn, is now visible in the upper part, the tympanum, and part of the doorway, in which a window has been made. This door opened at the foot of a very steep staircase, which goes straight up to the third story of the building. This was only brought to light in 1870. It is remarkable that there are no openings from it on either side, no one could go out of the staircase except at the top. That this was the staircase of the ancient *Ærarium* is clearly proved by the incidental mention of it in one of the Orations of Cicero, in which he compares going up the stairs of the *Ærarium* to climbing the Alps^f. It would be hardly possible to build stairs more steep than those, as they are as steep as a step-ladder, but with higher steps. The third floor to which these stairs lead is the same that has been already mentioned, and is now used for lamps and lumber-rooms only; parts of the walls on that level are modern (that is, of the sixteenth century); other parts are very ancient; just as might be expected when the two upper stories, which were of wood only, were burnt, this third floor was damaged by the fire. Massive stone walls will not burn, and therefore parts of these were again made use of when the upper part was rebuilt of stone, and the arcade below was walled up to make it a more secure foundation.

A great fire took place here in the time of Sylla, when Varro was living. The upper part of the building being of wood was destroyed, and the lower part damaged, but it was soon restored. The eastern end of the building in the lower part was the portion then restored, this is shewn by the construction^g. The inscription remains in its place on one of the flat openings over the passage

^f "Faith of Gods and men! No vouchers are found for two hundred or three hundred sesterces! What number of men? Six hundred at the most. In what land was the negotiation made? There; there; I say in that place which you see. No money is given beyond what is ordered? Yes, indeed, no money is moved without many letters. What is this accusation? *Was it more easy to climb the Alps than the steps of the Ærarium?*" (Cicero, *Oratio pro M. Fonteio*.)

The large sums mentioned in this passage, which had to be paid in copper money, and the large number of men to be paid also, indicates a place of some extent, and not the mere cell of a temple, which was always a small place. The cell of the temple of Saturn was over the entrance to the *Ærarium*, which was therefore considered by the people as part of it.

^g This is visible in another photograph, No. 578.

that leads to the *Ærarium* at the west end of the building, below the level of the modern *clivus* that descends to the arch of Septimius Severus; the ancient *clivus*, which descended to the *Lautumiæ* of the Mamertine Prison, goes straight down from the west end of the *Ærarium* to the portion of that prison lately discovered. The communication is cut off by the modern *clivus*, which goes across it close to the building. These steps over the ancient *clivus* must have led from the *Græcostasis*^h.

Suetonius, in the life of Claudiusⁱ, calls the treasury *Ærarium Saturni*, which agrees with Varro. Towards the opposite end of the building there is another ancient staircase, not steep like that of the Treasury, but winding about the angles so as to make a more easy ascent, and this went up to the fourth story, not the third only. In the ancient partition-wall in the third story are the marks of the stairs, sloping upwards in a gradual incline to the fourth story. Descending from these the stairs can be followed down to the *Ærarium* or Treasury chambers at the east end, and there is a doorway^j at the foot of this staircase, through the basement or *podium* of the temple of Concord, which was a portico with a small cell over the entrance to the *Senaculum* or Senate-house, just as the other was to the Treasury. The actual chamber in which the great Roman Senate, which was a numerous body, was accustomed to assemble was in the fourth story, and thus in the wooden part of the old building over the large chamber, now called the saloon in the third floor, which is traditionally said to have been the Senate-house. It is quite possible that there was an upper and a lower chamber in the Senate-house itself, and that the present saloon was the lower chamber.

It must be remembered that Varro wrote about a century before the Christian era, and he mentions the *Senaculum* or Senate-house in such a manner as to shew that it was part of this building, at the top of the steps from the *Græcostasis*. His precise words are very important in connection with the building, and are confirmed by the construction, as we have said.

“This is called *Græcostasis* from a part and from many. The Senate-house was above the *Græcostasis*, where the Temple of Concord and the *Basilica Opimia* (were situated). The *Senaculum* or Senate-house was so called from the Senate, or the *Seniores* who assembled there.”

^h “Is *Græcostasis* appellatus a parte et multa. *Senaculum* supra *Græcostasim* ubi *Ædes Concordiæ* et *basilica Opimia*. *Senaculum* vocatum, ubi *senatus* aut ubi *seniores* consisterent: dictum ut *γερουσία* apud *Græcos*.”

(T. Varro, de Ling. Lat., lib. v. c. 32, pp. 155, 156.)

ⁱ Suetonii, Claudius, 24.

^j This doorway was walled up by Canina about 1860.

That the Ærarium or Public Treasury was a part of the same building as the Tabularium, or public Record Office, is evident from the following passage in the "Annals" of Tacitus:—

"This produced a decree by which it was enacted that no sentence of condemnation should for the future be sent *to the Treasury* till the tenth day after passing it ^k."

There are other passages in Cæsar^l and Cicero^m to the same effect. It will be seen at once how exactly this agrees with the existing building, in which the Ærarium is under the Tabularium.

The standards of the army were also kept in the same building, probably in the third story over the Tabularium, where the lamps used for illumination are now kept with other lumber, or things used occasionally only, thus keeping up the old custom. The evidence of this is again given clearly by Livy:—

"All these measures were executed with so much expedition, that the standards were brought out *from the Treasury* on that day ⁿ," &c.

Suetonius^o calls the Ærarium after Saturn, but that does not imply that it was *in* the temple, merely that it was connected with it, and called by that name. Pliny^p, in one of his letters to the Emperor Trajan, gives it the same name; but this merely shews that it was the usual name for it, and does not at all prove that the Treasury was *in the temple*. Plutarch also gives it the same name, but the same remark applies to this passage as to the others. The care of this great building was entrusted to the quæstor Urbanus during the time of the Republic, with whom the tribune of the Treasury, *Tribunus Ærarii*, was associated. In the time of Augustus it was made over to the prætors, as we learn from Suetonius^q; but Claudius restored it to the quæstors^r; and Nero again gave it to the prætors^s, as we are told by Tacitus, who also recapitulates what Suetonius has said of the two previous Emperors:—

"Claudius restored the quæstors, and, to encourage them to act with vigour, promised to place them above the necessity of soliciting the suffrages of the people, and, by his own authority, to raise them to the higher magistracies. But the quæstorship being the first civil office that men could undertake, maturity of understanding was not to be expected. Nero, for that reason, chose from the prætorian rank a set of new commissioners, of known experience and tried ability ^t."

^k Taciti Annales, lib. iii. c. 51.

^l Cæsar, de Bello Civil., lib. iii. c. 81.

^m Cicero, Pis. 35, Arch. 5.

ⁿ Livii Hist., lib. iii. c. 69.

^o Suetonii Claudius, c. 24, "Curam Ærarii Saturno reddidit."

^p Plinii Epist., lib. x. c. 20.

^q Suetonii Augusti, c. 36.

^r Ibid., Claudius, c. 24.

^s Taciti Annales, lib. xiii. c. 9; Hist., lib. iv. c. 9.

^t Taciti Annales, xiii. 29.

It is evident that in this passage the name of the Treasury is intended to include the other parts of this great building of the municipality of Rome, who still hold it, and have always done so, except when Rome has been in the power of barbarians. The value of the permanent character of the municipal institutions of ancient Rome is hereby strikingly illustrated. (Our own municipalities in England had their origin in the time of the ancient Romans.)

That the *Ærarium* must have been of great extent, and have contained many chambers, is evident from many passages in the classical authors. We must always bear in mind that the ancient Romans had no paper-money, and that their enormous army was paid in copper or bronze coin, which would necessarily require a large space. Besides the regular annual revenue, it also contained a reserve fund, which was only to be used in case of necessity, and the chambers containing this were called the Sacred Treasury (*Ærarium Sanctum*). This is mentioned by Livy:—

“While the consuls were busy in expediting the other necessary preparations for the campaign, it was resolved to draw out of the treasury the vicesimary gold [that is to say a fund formed of the twentieth part of the value of slaves enfranchised], which was reserved for exigencies of the utmost necessity. There was drawn out accordingly, to the amount of four thousand pounds’ weight of gold^u.”

The Sacred Treasury is mentioned also by Cæsar:—

“Intelligence of this being brought to Rome, so great a panic spread on a sudden, that when Lentulus, the consul, came to open the Treasury, to deliver money to Pompey by the Senate’s decree, immediately on opening the hallowed door he fled from the city. For it was falsely rumoured that Cæsar was approaching, and that his cavalry were already at the gates^v.”

It is also mentioned by Cicero^x in more than one passage. There must have been a secure place to keep all this quantity of gold, and a more secure place would hardly be contrived than those chambers at the west end of the *Ærarium*, to which it is even now difficult to see how access was obtained. There is no entrance to them from the staircase, as before mentioned.

Tacitus^y says that the Sybilline books were destroyed when the Capitol was burnt in the civil war; the natural place for them to be kept in was the Tabularium or Record Office, it was therefore this building that was burnt, and although the walls of the lower part of the building were not destroyed, all their contents probably would be.

^u Livii Hist., lib. xxvii. c. 10.

^v Cæsar, de Bello Civil., lib. i. c. 14.

^x Cicero, Epist. ad Atticum, lib. vii.

c. 21; ad Verrem, lib. iv. c. 63.

^y Taciti Annal., lib. vi. c. 12.

That the Senaculum, or Senate-house, was in part of this great public building is evident from the following passage in Livy, in the year 578 of Rome, B.C. 175 :—

“The Censors paved the *clivus* of the Capitol (from the forum) and the arcade (*porticus*), from the temple of Saturn to the Senate-house in the Capitol, and the court above it.”

As the building was on the steep slope of the hill, the court at the top would be above the Senate-house in the third floor—there were three floors below the level of the court. There is an arcade now existing of very early character, by the side of the modern staircase that goes up to the offices of the municipality ; it is not of the earliest period in the building, the outer wall is earlier, and there is a straight vertical joint at the junction of the two walls ; this arcade belongs to the early days of the Republic. The outer wall is the one that Terentius Varro mentions to have belonged to the city of Saturn, on the hill that was afterwards made the Capitol of the united city, before the junction with the Romans on the Palatine. This transverse *porticus* or arcade was apparently a continuation of that of the Tabularium, along the western side, forming a connection with the other parts of the building. Varro^a says (as we have seen) that the Senaculum was also near the Græcostasis, where the temple of Concord and the Basilica Opimia were situated. The Græcostasis was the place on the western front of the temple of Concord, where the ambassadors of the Greeks and others had to wait until they were admitted, and to hear the decrees of the Senate, which were announced from the top of the steps, under which was the entrance to the stairs that led up to the Senate-house. It was impossible (as we have shewn) for the Senate to have assembled in the small cell of this temple. A great flight of steps went down from the small court called Græcostasis to the Prison on the north-east corner of the Forum Romanum. The steps and the court are mentioned together by Cicero^b. Pliny^c also mentions the court between the Rostra and the Græcostasis as having a south aspect, and this court has that aspect, it is sheltered from the north by the great public building ; he also mentions the slope from this point to the prison. And again he says that—

“Flavius . . . made a small gilt structure in the Græcostasis *which* was above the Comitium^d.”

^z Livii Hist., lib. xli. c. 32.

^a T. Varro, de Ling. Lat., lib. v. c. 32, p. 155, ed. Spengel. See the passage quoted in note h, p. 38.

^b “Deinde ejus operæ repente a

Græcostasi et gradibus clamorem satis magnum sustulerunt.” (Cicero, Epist. ad Q. Fratrem, lib. ii. ep. i.)

^c Plinii Nat. Hist., lib. vii. c. 60.

^d Ibid., lib. xxxiii. c. 6.

That is, on the higher level within the old wall and gate of Saturn. The Comitium was an open space in the forum itself, on the lower level; the two temples and the old gate between these were not strictly speaking *in* the forum, but all the space at the foot of the great public building was often so considered.

That the upper part of the Capitolium was of wood, and that it had wooden porticos attached to it, is proved by the account of the burning of it in the civil war, as recorded by Tacitus :—

“Martialis had no sooner entered the Capitol, than the Vitellian soldiers appeared before it; no chief to lead them on; all rushing forward with impetuous fury, and every man his own commanding officer. Having passed the forum, and the temples that surround it, they marched up the hill that fronts the Capitol, and after halting there to form their ranks, advanced in regular order to the gates of the citadel. On the right side of the ascent, a range of porticos had been built in ancient times. From the top of those edifices the besieged annoyed the enemy with stones and tiles. The assailants had no weapons but their swords. To wait for warlike engines seemed a tedious delay to men impatient for the assault. They threw flaming torches into the portico nearest at hand; and, seeing the destruction made by the devouring flames, were ready to force their way through the gate, if Sabinus had not thrown into a heap all the statues that adorned the place, and, with those venerable monuments of antiquity, blocked up the passage. The Vitellians pushed on the assault in two different quarters; one near the grove of the asylum, and the other near the hundred steps of the Tarpeian rock. Both attacks were unforeseen. Near the asylum grove the affair grew serious. On that side of the hill, the houses, which had been built during a long peace, were raised as high as the foundation of the Capitol. The besiegers climbed to the top of those buildings, in spite of every effort to stop their progress. The roofs were immediately set on fire, but whether by the besieged, or the besiegers, is uncertain. The current opinion ascribed it to the former. The flame soon reached the contiguous porticos, and in a short time spread to the eagles (a set of pillars so called) that supported the buildings. The wood, being old and dry, was so much fuel to increase the fire. In the conflagration that followed, the Capitol, with all its gates shut, and neither stormed by the enemy nor defended by Sabinus, was burnt to the ground.

“From the foundation of the city to that hour, the Roman people had felt no calamity so deplorable, no disgrace so humiliating. Without the shock of a foreign enemy, and, if we except the vices of the age, without any particular cause to draw down the wrath of heaven, the temple of Jupiter, supreme of gods,—a temple, built in ancient times with solemn rites and religious auspices, the pledge of future grandeur,—which neither Porsena, when Rome surrendered to his arms, nor the Gauls, when they took the city by storm, had dared to violate; that sacred edifice was now demolished by the rage of men contending for a master to reign over them. The Capitol, it is true, was once before destroyed by fire during the violence of a civil war; but the guilt was then confined to the treachery of a few incendiaries, the madness of evil-minded men. In the present juncture, it was besieged with open hostility, and in the face of day involved in flames. And what adequate motive? What object in view to atone for so wild a phrensy? Was the sword drawn in the cause of public liberty? . .

“Tarquinius Priscus, during the war which he waged against the Sabines, bound himself by a vow to build that sacred structure. He afterwards laid the foundation, on a plan suggested by his own vast idea of the rising grandeur of the empire, but inconsistent with the circumstances of an infant state. Servius Tullius, assisted by the zeal of the allies of Rome, went on with the work, and after him Tarquin the Proud, with the spoils of Suessa Pometia, added to the magnificence of the building. But the glory of completing the design was reserved for the era of liberty, when kings were deposed and banished for ever. It was under the Republic that Horatius Pulvillus, in his second consulship, performed the ceremony of dedicating the temple, at that time finished with so much grandeur, that the wealth of after ages could do no more than grace it with new embellishments; to its magnificence nothing could be added. Four hundred and sixteen years afterwards, in the consulship of Lucius Scipio and Caius Norbanus, it was burnt to the ground, and again rebuilt *on the old foundation*. Sylla, who in that juncture had triumphed over all opposition to his arms, undertook the care of the building; the glory of dedicating it would have crowned his felicity, but that honour was reserved for Lutatius Catulus, whose name, amidst so many noble monuments of the Cæsars, remained in legible characters till the days of Vitellius. Such was the sacred building which the madness of the times reduced to ashes^e.”

TEMPLE OF SATURN.

The temple of Saturn was evidently the one from which a staircase ascends to the Capitol, excavated in 1870. This passes behind the Tabularium at the west end; the evidence of this site is clear from several passages in classical authors. The Public Treasury was connected with this temple, therefore the staircase to communicate with the public offices above was necessary. It was one of the earliest buildings in Rome; the present remains of the portico are of the third century, but probably the old cell connected with the Treasury was long retained; and the *Ærarium* or Public Treasury was under the Tabularium, and was connected with the *cella* of the temple. The place for keeping public records in bronze plates or tables would very naturally be connected with the Treasury for the public money. Terentius Varro^f (as we have seen) mentions it as one of the three buildings remaining in his time of the city of Saturn, that is, the city on the hill of Saturn before the time of Romulus, or before the union with the Romans. It was on the level of the lowest story, immediately in front of the *porticus* of the Capitol used for the

^e Taciti Hist., lib. iii. c. 71, 72.

^f “Ejus vestigia etiam nunc manent tria, quod Saturni fanum in faucibus quod Saturnia porta quam Junius scribit ibi, quam nunc vocant Pandanam

quod post ædem Saturni in ædificiorum legibus privatis parietes postici muri sunt scripti.” (T. Varro, de Ling. Lat., lib. v. c. 7.)

Tabularium, of which arcade we have the remains, though walled up. It was also above the Clivus Capitolinus, the inclining or sloping road up to the Capitol, which was paved B.C. 174, and the building is mentioned by Livy^g on that occasion. The lower part of it is visible. Macrobius^h, in the Saturnalia, mentions it as the Treasury—"The Romans would have the temple of Saturn for their Treasury."

Solinusⁱ mentions it in the same manner:—"The building which had been the Treasury of Saturn was consecrated as a temple in his honour." Plutarch^k repeats the same story in his life of Publicola:—"The Treasury of Saturn was made into a temple, which remains at the present time," that is, in the time of Plutarch.

Servius^l, in his Commentary or Scholia on the second Georgic, describes this still more distinctly:—"The Tabularia *populi*, where the public records were preserved (the Public Record Office of the period), signifies also the temple of Saturn, in which was the Treasury, and there are placed the acts by which the slaves were made free," (equivalent to the private acts of parliament in England in our own days. If slavery still existed there as it did in Rome, it would be necessary to preserve carefully the deeds by which any family was made free.) In Rome, all public acts were recorded on bronze plates, to make them more permanent; unfortunately the value of the bronze for coining money, and making bronze ornaments, has led to the melting-down of the greater part of these public records. Both Dionysius and Livy distinctly state that the temple of Saturn was in the Forum Romanum^m. This temple was dedicated in A.U.C. 256 by the consuls, A. Sempronius and M. Minucius, who then instituted the Saturnaliaⁿ.

Cicero playfully alludes to the steepness of the stairs of the Ærarium, comparing them to the Alps (as we have seen), and these steep stairs remain to the present time (though long unknown), having been excavated in 1870°.

^g "Censores . . . et clivum Capitolinum silice sternendum curaverunt, et porticum ab æde Saturni in Capitolium ad Senaculum, ac super id curiam." (Livii Hist., lib. xli. c. 27.)

^h "Ædem vero Saturni ærarium Romani esse voluerunt." (Macrobian Saturnalia, c. 8.)

ⁱ "Ædem etiam quæ Saturni ærarium fertur, comites ejus condiderunt in honorem Saturni." (Solinus, c. 2.)

^k Plutarch, Publicola.

^l "Populi tabularia ubi acta publica continentur significat autem templum

Saturni, in quo et ærarium fuerat, et ubi reponerentur acta quæ susceptis liberis faciebant parentes." (Servius in Virgilii Georgica, v. 502.)

^m "Et arcus interdiu sereno cœlo super Ædem Saturni in foro Romano intentus," &c. (Livii Hist., lib. xli. c. 21.)

ⁿ Livii Hist., lib. ii. c. 21.

^o "Quæ est igitur ista accusatio, quæ facilius possit Alpes, quam paucos ærarii gradus ascendere? diligentius Rutenorum, quam populi Romani defendat ærarium? (Cicero pro Fonteio, cap. i. 4.)

Servius, in another passage, still more distinctly indicates the site :—

“The bones of Orestes, translated from Aricia, were placed and buried in front of the temple of Saturn, which is in front of the *clivus* of the Capitol, near the temple of Concord ^p.”

TEMPLE OF CONCORD.

The temple of Concord was rebuilt by Tiberius, as recorded by an inscription, and it was consecrated by him in A.U.C. 764, as mentioned by Dion Cassius ^q.

It is also mentioned by Dion as being near the prison. There is a representation of it on a coin of Tiberius. It is believed to have been again rebuilt by Septimius Severus, with many others.

Dion Cassius also says that :—

“The Senate assembled in the building *near* the temple of Concord, having learned the state of feeling among the people, and that he (Sejanus) was not supported by the Prætorian Guard, sentenced him ^r,” &c.

This temple is several times mentioned by classical authors and on inscriptions, and in such a manner as to make it probable that there were more than one, although several of the passages apply to rebuildings of the same temple. The earliest mention of it that we have met with is in the year B.C. 400, on an inscription in which it is described to be in the area of Vulcan : this is known to have been at the foot of the Capitol, between the temples of Saturn and of Concord, which had been built in it ; these were *almost in* the Forum Romanum, but within the boundary of the Capitol ; the entrance to this early fortress was the Porta Saturnii, or gate of Saturn, and the temple of Saturn was just within the wall on the western side, that of Concord on the eastern side. The level within the wall is higher than that of the Forum proper, but all the space outside of the Tabularium was commonly considered as part of the Forum, although it had not been so originally.

Plutarch, in his life of Camillus, says that—

“The Senate, assembled after the death of Camillus, voted that the temple which he had vowed to Concord should be built upon a spot *fronting* the Forum and place of assembly.”

In B.C. 303 a temple of Concord, in the area of Vulcan, was

^p Servius in *Æneid*. Virgil., lib. ii. c. 8, and lvi. c. 25.
v. 116. ^r Ibid., lib. lviii. c. 11.
^q A.U.C. 747, Dion Cassius, lib. lv.

dedicated by Caius Flavius, the Curulis Ædilis, and Cornelius Barbetus, the Pontifex Maximus, who was reluctantly compelled by the people to dictate the form of words, although he insisted that no one below the rank of a Consul or a Commander-in-chief ought to dedicate a temple^s.

The next mention of it is in the year B.C. 216 by Livy, who says it was *founded in the arx* by Marcus Aurelius, in fulfilment of a vow of Lucius Manlius a few years before^t.

In the year B.C. 211, Livy mentions that the statue of Victory on the summit of the temple of Concord was struck by lightning, and fell as far as the other emblems of Victory on the *antefixæ*, where it remained stuck fast, which makes it appear that it was of bronze, and partially melted by the lightning^u.

The Ædes Concordiæ is enumerated among the three *senacula*, or places for the assembling of the Senate. In B.C. 121 a temple of Concord *in the Forum*, and a Basilica Opimia, are mentioned as built or rebuilt (?) by the Consul Opimius.

Many modern writers assume that there were two temples, one in the Forum, the other in the Arx, which they consider to have stood on the summit of the Capitoline Hill; but as this temple, although fronting the Forum and almost in it, which agrees exactly with the words of the ancient authors, is still within the wall of the Capitol, it seems more probable that the Arx or Citadel of the City was at that period the whole of the Capitol, and not merely a small part of it. Whether this was the temple rebuilt by Augustus and Livia, as is mentioned by Ovid^x, and dedicated by Tiberius, or they built a new temple in the *porticus* of Livia, is another doubtful question; but a temple of Concord is certainly mentioned by Ovid as being dedicated by Livia to her husband Augustus; he calls it “a magnificent temple, which she dedicated to her beloved husband.” He then mentions her splendid portico, which, he adds, was on the site of a very large house, which had been levelled to the ground by

^s “Ædem Concordiæ in area Vulcani summa invidia nobilium dedicavit.” (Livii Hist., lib. ix. c. 46.)

^t Livii Hist., lib. xxii. c. 33.

^u Ibid., lib. xxvi. c. 23.

^x “Te quoque magnifica, Concordia, dedicat æde

Livia, quam caro præstitit illa viro.
Disce tamen, veniens ætas; ubi Livia nunc est

Porticus, immensæ tecta fuere domus.
Urbis opus domus una fuit: spatium-

que tenebat,

Quo brevius muris oppida multa tenent.

Hæc æquata solo est, nullo sub crimine regni,

Sed quia luxuria visa nocere sua est.
Sustinuit tantas operum subvertere moles

Totque suas heres perdere Cæsar opes.”

(Ovidii Fasti, lib. vi. l. 637 to 646.)

Augustus, because (as the poet says) its very gorgeousness was considered injurious to public virtue. It had been the palace of Vibius Pollio, who had bequeathed it to Augustus. The probability is that it was razed to the ground because he and Livia saw what a magnificent site for a grand portico and temple was afforded by the artificial platform on which it stood. The fragment of the marble plan of Rome, found in 1867 on the site of a temple at the back of the church of SS. Cosmas and Damian, gives the plan of the Porticus Liviæ, with some building in the middle of it, and the plan agrees exactly with that of the platform now occupied by the church and monastery of S. Francesca Romana. That a temple of Concord was rebuilt by Constantine, is proved by an inscription preserved in the Lateran, and the existing building on that site is of his time.

The number of statues mentioned by Pliny and by Dion Cassius as being placed in the temple of Concord, could hardly have left room for the Senate also to assemble there.

We are told that the *cella* of this temple was 125 feet long, and was placed transversally to the portico, and that it was the place for meetings of the Senate. There is no space upon the *podium* or basement for such a *cella*, it could only be the corridor at the back; and as that is immediately occupied by the stairs, there is no space for the Senate to assemble excepting above in the hall to which these stairs lead. When Cicero^y mentions the Cella Concordiæ over the *Clivus Capitolinus*, as the place where armed men stood, and where the Senate and the Equestrian order were assembled, he could hardly mean the small *cella* of a temple only.

Servius^z, in his notes in the second Georgic, says that the Tabularia in which the public acts were contained, and the *Ærarium* or

^y “Adeone pudorem cum pudicitia perdidisti, ut hoc in eo templo dicere ausus sis, in quo ego senatum illum, qui quondam florens orbi terrarum præsidebat, consulebam, tu homines perditissimos cum gladiis collocavisti? At etiam ausus es (quid autem est, quod tu non audeas?) Clivum Capitolinum dicere, me consule, plenum servorum armatorum fuisse . . . Quis enim eques Romanus, quis, præter te, adolescens nobilis, quis ullius ordinis, qui se civem meminisset, quum senatus in hoc templo esset, in Clivo Capitolino non fuit? quis nomen non dedit? quamquam nec scribæ sufficere, nec tabulæ nomina illorum capere potuerunt.

“Jam illud cujus est, non dico audaciæ (cupit enim se audacem), sed, quod

minime vult, stultitiæ, qua vincit omnes, Clivi Capitolini mentionem facere, quum inter subsellia nostra versentur armati? quum in hac Cella Concordiæ, O Dii Immortales! in qua, me consule, salutare sententiæ dictæ sunt, quibus ad hanc diem viximus, cum gladiis homines collocati stent? &c.

CEDANT ARMA TOGÆ.”

Cicero, Philippica Secunda, c. 7, 8.

^z “*Insanumque forum*; litigiosum. Populi tabularia; ubi actus publici continentur. Significat autem templum Saturni in quo et ærarium fuerat et [ubi] reponerentur acta quæ susceptis liberis faciebant parentes.” Juvenalis (9. 84.) (Servius, Comment. in Virg. Georg., ii. v. 502.)

Treasury, were both *in* the temple of Saturn. This is evidently a loose mode of expression, and it leaves out the temple of Concord altogether.

THE CURIA.

Vitruvius^a says that the Treasury, the Prison, the Law Court (*Curia*), were *contiguous* to the Forum, but so arranged that their large size and symmetrical form harmonized well with it.

“The *Ærarium*, the Prison, the *Curia*, are contiguous to the Forum, but so that their large size and symmetry harmonize with it. Chiefly, indeed, the *Curia* is in the first place to be made worthy of the dignity of the municipality, or of the city; and if it were square it would lose as much in height as it would gain in width; if it were oblong, the length and width would compose better, and the half of the whole composition would be given to the height of the vaults” (of the Tabularium?).

From this it appears that the great public building in question was also called the *Curia* or Law Court. Lampridius^b, in the life of Alexander Severus, says that “the Senate assembled frequently in the court (*curia*), that is, the temple of Concord.” Julius Capitolinus, in the life of Maximus and Balbinus, says that the Senate assembled in the temple of Concord^c. This also agrees with Varro^d.

^a “*Ærarium, Carcer, Curia foro sunt conjungenda, sed ita uti magnitudo symmetriæ eorum foro respondeat. Maxime quidem curia inprimis est facienda ad dignitatem municipii sive civitatis; et si quadrata erit, quantum habuerit latitudinis, dimidia addita constituatur altitudo; sin autem oblonga fuerit, longitudo et latitudo componatur et summæ compositæ ejus dimidia pars sub lacunariis altitudini detur.*” (Vitruvius de Architect., l. v. c. 2.)

^b “*a. d. pridie nonas Martias cum senatus frequens in curiam hoc est in ædem Concordiæ templumque inauguratum convenisset,*” &c. (A. Lampridii Alexander Severi, c. vi. l. 18.)

^c “*Senatus pertrepidus in ædem Concordiæ vii. idus Junias concurrit,*” &c. (Julii Capitolini Maximus et Balbinus, c. i. l. 4.)

^d “*Comitium ab eo quod coibant eo comitiis curiatis et litium causa. Curiae duorum generum; nam et ubi curarent sacerdotes res divinas ut Curiae veteres,—et ubi senatus humanas ut curia Hostilia, quod primus ædificavit Hostilius Rex. Ante hanc Rostra quovis id vocabulum, ex hostibus capta fixa sunt rostra. Sub dextra hujus a comitio locus substructus, ubi nationum subsisterent legati qui ad senatum essent missi.*” (T. Varro, de Ling. Lat., lib. v. pp. 155, 156.)

OPUS QUADRATUM.—THE TEMPLE OF JUPITER FERETRIUS.

IT is important to demonstrate that the construction of the walls of all the earliest buildings of Rome, recorded by Livy, is the same, as this bears out the truth of his history. The primitive fortifications of the Palatine Hill have already been described. The foundations of a temple of the same early character, called Etruscan, were excavated by the Italian Government in 1871-72, at the west end of the Arx of Romulus (*Roma Quadrata*), which formed the northern end of the Palatine Hill. There is a great flight of steps up to this temple from the direction of the Circus Maximus, and the whole of the wall is of the same early construction as the walls of the fortifications, and as the *Ærarium* and the *Tabularium* on the Capitol. This temple can hardly be any other than that of Jupiter Feretrius.

The temple was built in the year 4 of Rome, B.C. 749, and was the first temple to be consecrated in Rome, according to Livy^a:—

“He routed and dispersed their army; pursued it in its flight; slew their king in the battle, and seized his spoils; after which he made himself master of their city (*Cænine*) at the first assault. From thence he led home his victorious troops; and being not only capable of performing splendid actions, but also fond of displaying those actions to advantage, he marched up in procession to the Capitol, carrying on a frame, properly constructed for the purpose, the spoils of the enemy’s general whom he had slain; and there laying them down under an oak, which the shepherds accounted sacred, he, at the same time, while he offered this present, marked out with his eye the bounds of a temple for Jupiter, to whom he gave a new name, saying, ‘*Jupiter Feretrius*’^b, in acknowledgment of the victory which I have obtained, I, Romulus the King, offer to thee these royal arms, and dedicate a temple to thee on that spot which I have now measured out in my mind, to be a repository for those grand spoils, which, after my example, generals in future times shall offer, on slaying the kings and generals of their enemies.’ This was the origin of that temple, which was the first consecrated in Rome^c.”

The walls are of tufa, of the same rude early character of construction as the other walls, known as the walls of Romulus, and the stones are of the same size. A grand staircase, or flight of steps,

^a “Hæc templi est origo, quod primum omnium Romæ sacratum est.” (Livii Hist., lib. i. c. 10.)

^b So called from the *feretrum*, or frame, supporting the spoils; the second, *spolia opima*, or grand spoils, were offered by Cornelius Cossus, who killed Tolumnius, King of the Veientians;

and the third by Claudius Marcellus, who killed Viridomarus, a king of the Gauls. The spoils, called *spolia opima*, or grand, or chief spoils, were so denominated when they were taken from a king or general-in-chief commanding an army.

^c Livii Hist., lib. i. 10.

descends from it in the direction of the Circus Maximus (as we have mentioned); the line from it would now pass just in front of the church of S. Anastasia, and straight to the *Carceres* of the Circus. This temple is stated to have been built in the Capitol, that is, in the Capitol of Romulus, before the union with the Sabines. The hill of Saturn, now called the Capitoline Hill, was added to the Roman city at a subsequent period, as stated by Livy; at that time it was occupied by the Sabines. At a later period, in the year 318 of Rome (B.C. 435), the spoils obtained from Veii by Cornelius Cossus, the military tribune, were deposited in this temple, near the spoils placed there by Romulus^d.

“Crowned with success in every quarter, the Dictator, in pursuance of a decree of the Senate and an order of the people, returned into the city in triumph. By far the most distinguished object in this procession was Cossus, carrying the *spolia opima* (grand spoils) of the king whom he had slain, while the soldiers chanted their uncouth verses, extolling him as equal to Romulus. With the usual form of dedication he presented and hung up the spoils in the temple of Jupiter Feretrius, near to those dedicated by Romulus, and first denominated *opima*, which were the only ones then existing^e.”

This passage in Livy, of the date of 318 of Rome, clearly proves that the temple of Jupiter Feretrius was on the Palatine Hill, contrary to the opinion of modern writers, who place it on the Capitoline Hill because Livy in his first book, at the time of the foundation of this temple in the year 4 of Rome, says it was *in Capitolio*, by which he evidently meant the Capitol or *arx* of the Palatine fortress before the union with the Sabines. After which (but not before) the hill of Saturn, which had been the *arx* or Capitol of the Sabine city, was made the Capitol of the united City of Rome, with the mixed population of the Romans and the Sabines. This union did not take place until after the foundation of this temple, and until after the capture of Antemnæ and Crustumene, which could hardly have been accomplished until some years after the foundation of the city. The *arx* or Capitol, betrayed by Tarpeia, must have been the *arx* of the Palatine fortress, before it was united into one city by having the hill of Saturn united with it^f. Tarpeia had to go down to the outer *mænia*, or earthwork, at the junction with the earthworks of the other fortress on the hill of Saturn, to fetch drinking water at the drawbridge, near where the Janus^g Quadrifrons

^d “*Spolia in æde Jovis Feretrii prope Romuli spolia, quæ, prima Opima appellata, sola ea tempestate erant, cum sollenni dedicatione dono fixit.*” (Livii Hist., lib. iv. c. 20.)

^e Livii Hist., lib. iv. c. 20.

^f Ibid., lib. i. c. 9—11.

^g This arch, with four faces, is usually called the Arch of Janus; it is built over the stream of water that now runs in the Cloaca Maxima.

now stands, the point at which the Aqua Argentina, the only drinking water on the Palatine Hill, fell into the stream that ran between the two fortresses, and had formed the lake of Curtius further to the east, where two other streams fall into it, all of which now run through the Cloaca Maxima.

The next wall of which we have the history (or as some say the legend only) is the one that was built to enclose the hill of Saturn and the Palatine in *one City*:—

“Numa, after his accession to the government, did not remove the particular temples belonging to the curiæ, but erected one temple common to them all, between the Capitoline and the Palatine hills. For both these hills had already been encompassed with one wall, the forum in which this temple was built lying between them. He also enacted that the keeping of the holy things, according to the custom established among the Latins, should be committed to virgins^h.”

Of this wall we have some important remains, although they were not generally understood. The line can be clearly traced. The hill of Saturn or Tarpeian rock was then, and not till then, made the capital of the united City. The scarped cliffs of that rock itself were considered a sufficient protection on the north side; a wall was joined on to it near the north-east corner, crossing the old trench of the previous fortifications of that hill, when it was a separate fortress, in which trench the road had been made on the line of the present Via di Marforio. The wall crosses that street near its northern end, and forms a ridge across it. Some excavations were made in 1872 in that street, under Mr. Parker's direction, and the tufa wall was found forming this ridge (as was expected), the line of it continuing across the south end of the Forum of Trajan, and the houses at that end of the Forum are built upon that foundation. The tomb of Bibulus is just outside of the line. The houses on the western side of the street are built upon a ledge of the tufa rock, those on the eastern side stand upon a tufa wall for a short distance within the ridge, but outside of this there are remains of the Forum of Trajan under the houses in this street. A short street goes from the Via di Marforio on each side of the *agger* or ridge. The southern part of the street is modern, made upon the vaults of part of the lower chambers of the great Mamertine Prison. The line of the wall continued straight from west to east, and joined on to that part of the Quirinal Hill which was afterwards cut away to enlarge the Forum of Trajan; it then turned to the right, or south, and remains for a considerable distance, forming the eastern wall of the Forum of

^h Dionysius Hal., Rom. Ant., lib. ii. c. 66.

Augustus, as far as the Torre de Conti, which stands on the site of a very ancient fortress, at one angle of that City. The line has run in this part from north to south, and near the southern end it is cut through by the Forum Transitorium, or Forum of Nerva. The wall on the southern side of this Forum (now the modern street, called *The Collonacci*,) is behind the houses, and is built of travertine in the style of the time of Augustus; it was the separation between the Forum of Augustus and that of Nerva. This wall of travertine is inserted at a right angle into the great wall of the Kings at about one-third of its height, the old wall being still visible (behind the houses on the north side of the street) fifty feet high and twelve feet thick, built of the usual great blocks of tufa. This great ancient wall has been cut through for the modern street in the seventeenth century. A drawing of Palladio is preserved, in which this wall is shewn, crossing the end of the street, with an arch cut through it in the same manner as at the end of the parallel street, where the arch (miscalled Arco di Pantano) is cut through the old wall.

After crossing the street and joining the Torre de Conti, the line of the wall turns again at an angle from east to west, passing under the houses on the south side of this street, the backs of which are built upon it; and at the corner of the next street, the marble columns of the temple of Pallas are built up against it, and the cornice built upon it. Behind these columns is seen an ancient doorway, that probably was one of the entrances of this second City. The wall must then have passed southwards against the eastern cliff of the Velia, and passing from thence under the end of the great platform on which S. Francesca Romana now stands. Then along the foot of the southern end of the Palatine, and continuing along the foot on the western side, we come to some remains of it, now in a garden behind the houses, and we soon arrive at the well-known towers under the church of S. Anastasia, usually supposed to have belonged to the Circus Maximus, but more probably belonging to this fortress; most likely at another angle, where it turned and went across the valley to the Pulchrum Littus on the bank of the Tiber, which formed part of this second fortification. It then continued against the bank of the Tiber, until it arrived opposite the hill of Saturn on its western side, and was then carried across and joined on to it. A portion of the line in this interval may be seen under the church of S. Angelo in Pescheria. This line was long retained as the boundary of *the City* in that direction, and the Porta Triumphalis (now forming the porch of the church) was between the *porticus* of Octavia *outside of the City* and that of Philippus *inside the City*.

These remains of the wall of the second City have hitherto been misunderstood, and have been attributed either to the original City of Romulus or to that of Servius Tullius. The latter, no doubt, made use of them whenever they served his purpose, for the fortification of the third City.

TEMPLE OF JUPITER CAPITOLINUS.

This temple, of which the ruins remain on the top of the Tarpeian rock, now in the garden of the Prussian Embassy, is built of the stone which the Italians call "sperone," and called by Vitruvius *Lapis Gabiensis*, which comes from the quarries at Gabii only. The temple of Jupiter Capitolinus was founded by Tarquinius Priscus, and completed by Tarquinius Superbus, according to Livy.

Gabii was conquered in the time of Tarquinius Priscus, and nothing is more natural than that the stone should be brought from the quarries there to commemorate that conquest in building this temple. Livy relates the two events in the same chapter, and completes the history in the following one. The temple stands in an area enclosed by a wall of the same early construction as the temple itself, agreeing in architectural character with the time of the Tarquinii. It was founded in the year 220 of Rome, B.C. 532; and consecrated in the year 246 of Rome, B.C. 506. It was therefore twenty-six years in construction, which marks it to have been an important building of the period. Forty talents of silver and gold had been taken from the Volscians just before, and were devoted to this work in commemoration of the victory and conquests.

"He (Tarquinius) began the war against the Volscians, which lasted for more than two hundred years after his death, and took Sueffa Pometia from them by storm; from the sale of the plunder of which place, having amassed silver and gold to the value of forty talents, he conceived the design of erecting a temple to Jupiter, of such grandeur as should be worthy of the King of gods and men, worthy of the Roman empire, and of the dignity of the place itself; for the building of this temple he set apart the money which arose from the spoils¹."

"Tarquinius, having thus acquired possession of Gabii, concluded a peace with the Etrurians, and then turned his thoughts to the internal business of the city; among which, the object of his principal concern was to leave the Temple of Jupiter on the Tarpeian mount a monument of his reign and of his name, to testify that of two Tarquinii, both of whom reigned, the father had vowed, and the son completed it²."

The temple of Jupiter Feretrius has usually been placed, by

¹ Livii Hist., lib. i. c. 53.

² Livii Hist., lib. i. c. 55.

modern writers on the ancient topography of Rome, on the Capitol, but this appears to have been a mistake. The temple that was on the site of the church of Ara Cœli, was not that of Jupiter Capitolinus. The ruins excavated on the summit of the Tarpeian rock a few years since, agree in so remarkable a manner with the history of the temple of Jupiter Capitolinus, that there can be little hesitation in considering them as identified. Although the remains are slight, they are sufficient to shew that it was a place of importance. The temple itself was small, but that was usual ; it was enclosed in a *porticus* or arcade, of which the back wall only remains, and these ruins are of the same early character as the rest, not so early as that of Jupiter Feretrius, but agreeing perfectly with the time of the Tarquins. The large enclosure belonging to the temple indicates a place of importance, and this accounts for its being so long as twenty-six years in construction. The ornamentation was no doubt of wood and bronze, according to the custom of that period ; we have only the foundations and the rude walls of construction remaining, but this very construction gives a date to it, and agrees with Livy's history.

OPUS RETICULATUM.

DOMUS AUGUSTIANA ET TIBERIANA.

One of the best examples in Rome of the *opus reticulatum* is the important house excavated in 1869-70, also on the Palatine. The walls are built of concrete as usual, but faced with the reticulated work to give them a smooth surface to receive the plaster to be painted upon. The situation and the peculiarities of this house agree entirely with the history of Suetonius and Dion Cassius, of the house of Hortensius purchased by Augustus for his own residence. This was added to a few years afterwards by the Senate, who were not satisfied with the "house of an ordinary citizen" in which Augustus resided. It was not grand enough for the Roman Emperor. They therefore insisted on adding state apartments decorated with mosaic pavements and fresco paintings, neither of which was found in the original house. This house of Hortensius is exactly "the house of an ordinary citizen" of the time of Julius Cæsar, or perhaps of Sylla, such as we see many examples of remaining at Pompeii. The state apartments were added at the north end of this house, and there is no internal communication between the original house and the addition to it. Augustus chose to retain his

privacy, and preferred going round into the state apartments when necessary. Between his original house and the street were some shops, the walls of which are faced in the same manner. There is no staircase from either of the shops, so that each was complete in itself. There is a back door into a passage which separates them from the rest of the house.

In the middle of the original house is a staircase going up to an upper story, now destroyed, which may have been of wood, and probably extended over the shops also. These are vaulted over, so that they could not interfere at all with the rest of the house. Such an arrangement appears to have been common in many of the large houses or palaces of the ancient Romans, and it is probable that each shop was an *insula*, being insulated from all the rest of the house. The fragments of the marble plan shew many such shops. The ground-floor of the house is the only one that is now visible, the underground floor of the original house has not yet been excavated. The state apartments are of the same height as the two lower stories of the original house.

The houses or palaces of Augustus and Tiberius are mentioned together in the Regionary Catalogue, which shews that they were near each other. It seems to be a common mistake to suppose that all the great works in Rome called by the name of this or that emperor, in whose time each happens to have been begun or finished, were entirely built by him. It is impossible that each of those works can have been built during the lifetime of any single emperor. The Senate, with the board of works acting under their orders, were a permanent body, and they formed a grand scheme for the embellishment of Rome under the Empire, to make it worthy to be the capital of the civilized world. This scheme was gradually carried out without regard to the life or death of any particular emperor, although the buildings erected in his time were called after his name as a compliment, just as was done quite recently with the buildings erected in the time of this or that pope. Pius IX. will probably go down to posterity as a great builder, because he has been pope for an unusually long period during a great building era, and it was the same with the Emperors. Those who had the longest reigns have the greatest number of buildings called after them. Attempts are vainly made to distinguish the works of this or that emperor, when there is no real division or distinction between the work of one and another.

In this manner the great palace at the north end of the Palatine, by modern topographers has been divided into the Palace of Tibe-

rius(?), of Caligula, and of Domitian, in whose time it was probably completed, as many of his brick-stamps have been found in the walls. Possibly it was damaged to some extent in the great fire in the time of Nero, and restored by Domitian afterwards, but it must be remembered that concrete walls at least six feet thick will not burn. They are faced with brick or tufa, cut into small wedge-shaped pieces, each faced with a diamond-shaped surface, called *opus reticulatum* (from the appearance of the meshes of a net). Fire would have little more effect on such a surface than on the concrete or rubble mass behind it, and as the chambers and passages were vaulted over, fire would have little effect on them.

The House of Augustus has been placed by modern authors towards the south end of the Palatine, on the western side under the Villa Mills, without any real authority for the conjecture, which is not consistent with the notices we have of it in contemporary writers and in the historians of the following century. It was the wish or the policy of Augustus to live as a private citizen, either from real modesty and a love of retirement, or because this only stimulated the citizens to insist on doing him more honour, and building him a grand palace suitable to the position of the head of the Roman empire. At first he insisted on living in the house of Hortensius, which was an ordinary citizen's house without ornament, or with very little, the columns being of *peperino*, which was the cheapest stone after the tufa of the hill itself, being brought from Albano only, although the travertine, a stone from the more distant quarries of Tibur (or Tivoli), had then been brought into use in Rome; this is a harder stone and not so rough, and was considered as a sort of marble or stone of luxury, which Augustus disdained. He afterwards accepted some splendour as befitting his rank, as Dion Cassius tells us; he adds, that he resided in the Prætorium (the *arx* or citadel) because Romulus had resided there.

In the year 1869, Cavalier Rosa, in the course of his excavations for the Emperor of the French, cleared out the chambers on the ground-floor of a house exactly answering to the description of the house of Hortensius. In the original parts of it there is no ornament whatever; it is of the time of Sylla or Julius Cæsar, which agrees with a house already existing in the time of Augustus, in which he went to reside. At the north end of this house large additions have been made, in which are fine mosaic pavements of a more ornamental character, and beautiful frescoes or paintings on the walls of the time of Augustus, some of the very finest works of art that have been found anywhere, equal, if not superior, even to any-

thing that has been found at Pompeii^k. This appears to agree exactly with the history that Augustus “accepted some splendour.”

Suetonius^l says :—

“He lived at first^m near the Forum Romanum, by the side of the steps or stairs of the ring-makers ; he afterwards moved to the Palatine Hill, where he resided in a small house belonging to Hortensius, not remarkable either for its size or for its ornamentation, the arcades being small, the pillars of peperino (*Lapis Albanus*), and the rooms without either marble or mosaic pavement ; he continued to use the same bed-chamber for both winter and summer during forty years.”

This shews that he continued to reside in the house of Hortensius, although he consented to some embellishment of it, and additions to it for the sake of splendour, which exactly agrees with the house recently discovered. It was the custom of the Romans to have subterranean chambers for use in the hot season, and these are what now commonly remain, as in this instance, where these are perfect but not yet excavated (May, 1872).

Dion Cassiusⁿ says that—

“The people planted laurels before his house on the Palatine, and hung a crown or wreath of oak-branches on the roof of it, as perpetual conqueror of the enemies of the state and servant of the citizens ; but they called his house a palace, and decreed that the Cæsar should always live on the Palatine, and that he dwelt in the Prætorium (that is, the *arx*, citadel, or keep), which he chose out of all the hill because Romulus had lived there. He accepted some splendour, because it was right that the Emperor should inhabit such a house as would deserve the name of a palace.”

Some of his coins also have the oak-wreath and the inscription—

CIVES SERVATOS.

This makes it clear that the house of Augustus was near the north-west corner of the hill, where the house of Romulus had been ; and

^k The subjects represented on the beautiful fresco picture are :—

Polyphemus at the mouth of a river on the sea-shore, half hid behind a rock or a block of granite ; he is driven by Cupid placed behind him, who, standing at the height of his shoulders, holds the reins. Galathea on a marine horse takes flight across the sea, in which two nymphs are swimming.

Another fresco represents—

Io guarded by Argus, who has a sword and a lance. Io is leaning against a column surmounted by a statue of Juno. She is covered by a light dress almost transparent, which shews part of her form visible. Mercury, who has his Greek name *Hermes* written at his feet, carries the caduceus, and wears

the traditional head-dress, and is advancing to kill Argus.

A third fresco represents—

A woman coming out of a house with a bouquet of flowers in her hand, followed by a slave carrying a basket. Above the door from which she is coming out a man is looking out of the window into the street, and on the balcony of another house two women are seen.

In other parts of the walls are paintings of birds, candelabra, columns, vases of flowers, &c.

^l Suetonius in Octaviano, cap. 72.

^m That is, as a young man ; he was born on the Palatine.

ⁿ Dion Cassius, lib. liii. c. 16.

the idea that the house under the Villa Mills, of which remains were found by Rancourail in the eighteenth century, was the house of Augustus, is a mistake. Those fine halls and chambers were part of the great palace of the time of Domitian, whose brick-stamps were found in the walls by Nibby. The Prætorium, or citadel of the Palatine, was clearly at the north end nearest to the Capitol, where considerable remains of the old tufa walls of the fortifications can still be seen on three sides of the *arx*, and the foundations of a series of towers along the north end.

Augustus was born on another part of the Palatine, called *ad capita bucolica*^o, or “at the ox-heads;” this is believed to have been one of the streets mentioned in the Regionary Catalogue as on the Palatine, and probably the zigzag road or street that descended from the gate at the north-east corner to the Forum Boarium, through the Janus in the Velabrum. This house in which he was born was probably near the site of the round church of S. Theodore, a temple was erected on this spot to his memory, and the bridge from the Palatine to the Capitol passed over it, or nearly over it. This temple was consecrated by Caligula, and there is a representation of it on one of his coins, with the inscription, *DIVO AVGVSTO S.C.* An inscription found in a *columbarium* of Livia, and now placed in the Capitoline Museum, records that this temple was on the Palatine^p. Dion Cassius informs us that the Senate ordered the house, in which he died^q, to be converted into a temple^r. Suetonius says that Tiberius began this, but left it unfinished^s, and that Caligula completed it^t. Dion Cassius adds that Caligula dedicated it with great ceremony^u. It is evident from this and many other passages in the classical authors, that the great works for the embellishment of Rome were carried on systematically, without regard to the life or death of this or that emperor.

We are also told by Suetonius, that Caligula, having added to the Palatine so as to bring it forward near to the Forum, also built a bridge to connect it with the Capitol, and that this bridge passed *over* the temple of Augustus, and he then began a new palace in the area of the Capitol^x.

^o “Natus est Augustus Marco Tullio Cicerone et Antonio consulibus (B.C. 63), ix. kalendas Octobres, paullo ante solis exortum, regione Palatii, ad Capita bubula: ubi sacrarium habet, aliquanto postquam excessit, constitutum.” (Suetonius in Octaviano, 5.)

^p AEDITVVS . TEMPLI . DIVI . AVGVSTI . ET . DIVAE . AVGVSTAE . QVOD . EST . IN . PALATIVM.

^q This is believed to be a mistake for, the house in which he *was* born.

^r Dion Cassius, lvi. 46.

^s Suetonius in Tiberio, c. 47.

^t “Opera sub Tiberio semiperfecta, templum Augusti theatrumque Pompeii, absolvit.” (Suetonius in Caligula, c. 21.)

^u Dion Cassius, lix. c. 7.

^x “. . . partem Palatii ad forum usque promovit . . . atque æde Castoris

This passage makes it clear that the temple of Augustus stood in that lower part of the Palatine, called also the Germalus, on which was the zigzag road from the gate (as mentioned) to the Velabrum, and to the Forum and the Capitol, passing round the lake of Curtius. The descent from the gate on the terrace, on which it opened, to the Forum, was too steep for a direct road, which could only have been a flight of steps. The house in which Augustus was born, and which was made into his temple, must therefore have been near to the present round church of S. Theodore^y, which is supposed to have been built upon the foundation of a round temple. Just beyond that church the road is divided into two branches, one of which goes down to the street between the Palatine and the Circus Maximus, the other to the Janus. The ground in the valley below was in the time of Romulus a swamp; the lake of Curtius was between the Palatine and the Forum Romanum, and this lake or swamp continued open as late as the first century, when the palanquin in which Galba was carried was overturned at that point^z. A stream that came down from the eastern slope of the Palatine met another stream from the western side^a of the Quirinal, and ran into and through this lake; and through this swamp it still runs, though now underground, in the Cloaca Maxima.

The palace of Tiberius was on the west side of the Palatine towards the Circus Maximus. It was not part of the grand palace, or series of palaces, of which we have remains all along the north end of the hill, beginning at the north-east corner, although it is usually so described. No division between them can be traced, they are part of one grand scheme for the embellishment of this part of Rome, which was carried out under successive emperors from about A.D. 20 to about A.D. 90, with some changes of the plan and additions to it, but without much rebuilding. These are on

et Pollucis in vestibulum transfigurata . . . interdiu vero cum Capitolino, sive secreto fabulantur . . . et in contubernium ultro invitatus super templum Divi Augusti ponte transmisso, Palatium Capitoliumque conjunxit. Mox, quo prior esset, in area Capitolina novæ domus fundamenta jecit." (Suetonius in Caligula, c. 22.)

^y It will be observed that Dion Cassius says, that on the site of the house in which he died was made a temple in his honour. Suetonius, on the other hand, says it was the house in which he was *born*. As Suetonius lived in the

first century of the Christian era, and Dion Cassius in the third, Suetonius is the better authority of the two, and this site agrees better with the history of this temple in other respects.

^z Plutarch in Galba, Suetonius in Galba, 20.

^a A spring still rises in a large ancient well under a wine-shop, just behind the church of S. Hadrian; it rises with considerable force, and the water from it has always run through the valley between the Palatine and the Capitol to the Tiber.

a higher level than the palace and bridge of Caligula, A.D. 37—41, and of a later period.

Tacitus, in describing the interview with Umbricius the Augur in the temple of Apollo, says that Otho passed by the house of Tiberius to the Velabrum, and thence to the Milliarium Aureum in the Forum Romanum. The remains of that palace stand upon the terrace on the western side of the *arx* of Romulus, with the back of the rooms, or of a *porticus*, built into the upper cliff. The walls are faced with *opus reticulatum* of his time, similar to that in the house of Nero. He therefore passed along the terrace in front of this *porticus*, and so along part of the Velabrum by a gradual decline to the Janus Quadrifrons, the extreme gate to the Forum Romanum and the Forum Boarium, east and west of it. The only gate at the north end of the hill is the one near the north-west corner, opposite to the Forum Romanum, but at a much higher level. This gate is now called Porta Romana, but it is doubtful whether this is the old name for it; on the one hand, it is immediately opposite to the fortress of the Sabines, on the Capitol behind the Forum. The road which passes through this gate is called the Clivus Victoriæ; it is a steep incline cut out of the tufa rock, and arched over by an arcade and vault, with part of the palace of the first century over it. The rock remains on a level with the top of the gate, and above it, a little further on to the west, in this particular part it has been cut away. On the other hand, the terrace is the upper part of a zigzag road called the *Ox-head* street, which descends to the Forum Boarium, the Smithfield of ancient Rome; and this supports the view that this was the Porta Mugionis, so called from the lowing of the cattle that passed through it. The road went to the arch of Janus, after making three turns. The first turn at an angle is just to the east of the Wall of Romulus, at that corner of the hill near the present church of S. Anastasia; the second terrace passes above the round church of S. Theodore^b, and turns again at the second angle, near the spot where there are remains of the bridge from the Palatine to the Capitol, a few yards to the east of that church. The bridge must have been of great height, the aqueduct carried upon the highest part of it on the level of the surface of the Palatine and the Capitol, supported probably on a triple arcade, of which we have two of the tall brick piers remaining, and a small portion of the lower line of arches and vaults to carry the road for horses, which was probably on the western side of the aque-

^b May not this round church be on Augustus(?), or was it the temple of the site of the house and temple of Minerva, near to it.

duct, and level with the foot of the upper line of arches carried upon a vault, built up against the two lower lines, of which also there are some remains^c.

The zigzag road continued its course from this lower angle on the line of the present road, in front of the round church, but from fifteen to twenty feet below the present level. The tops of the arches of the arcade (or *porticus*), by the side of it, are distinctly visible, just above the present level of the ground, between the round church and the arch of Janus, to which this road led. The level has been altered in the Middle Ages, and the line altered also at the end, and it now passes in front of the doorway of the church of S. Anastasia, at the higher level of the present road.

Tiberius placed in this temple of Augustus a celebrated painting, said to have been brought from Alexandria, mentioned by Pliny^d; also a statue of Livia, and ordered the Vestal Virgins to hold an annual service there^e. It was much damaged in the great fire in the time of Nero, and restored; it was apparently rebuilt by Antoninus Pius, who gives a representation of it on one of his coins, as a square temple with eight columns in front. It must have been of considerable size, with the library attached to it, as Pliny says that there was a statue of Apollo in it forty feet high; this was a "bronze statue of wonderful beauty^f."

Behind this temple of Augustus on the Palatine, on the site of his house, must have been another temple, at a short distance from it, dedicated to Minerva, mentioned by Martial^g, and on an inscription of the time of Trajan^h, which was fixed on the back of the temple of Augustus—AD MINERVAM.

One of the fragments of the marble plan of Rome (engraved in Piranesi's plates), shews a square temple with colonnades on the four sides, with eight columns on the sides, and near to it a small temple also with a colonnade round it. In front of both is a *porticus* or

^c Aulus Gellius mentions a library in the house of Tiberius. This is also mentioned by Vopiscus in the life of Probus.

"Cum in domus Tiberianæ bibliotheca sederenus, ego et Apollinarius Sulpitius." (Aulus Gellius, lib. xii. c. 19.)

"Usus autem sum . . . præcipue libris ex bibliotheca Ulpia . . . item ex domo Tiberiana." (Vopiscus in Probo, c. 2.)

^d Plinii Nat. Hist., lib. xxxv. c. 10.

^e Dion Cassius, lib. lx. c. 5.

^f "Videmus certe Tuscanicum Apol-

linem in bibliotheca templi Augusti, quinquaginta pedum a pollice, dubium ære mirabiliorem, in pulchritudine." (Plinii Nat. Hist., lib. xxxiv. c. 18.)

^g "Sexte, Palatinæ cultor facunde Minervæ Ingenio frueris qui propiore Dei." (Martialis, lib. v. epigr. 5.)

^h Descriptum et recognitum

. IMP .

CAESAR . DIVI . NERVAE . F . NERVAE . TRAJANI .

Tabula aenea ovæ fixa est Romæ in Mvro post templum divi Aug. ad Minervam.

arcade, also with columns in front of the piers, and the colonnade of another temple facing this, as if on the other side of the street ; and running across this, on the opposite side of the square temple from the round one, is a double line, which may very well indicate a bridge crossing the street. It seems probable that these two temples are the square temple of Augustus, and the round temple of Minerva, on the site of the latter of which the round church of S. Theodore has been built. In that case, the bridge from the Palatine to the Capitol nearly touches the temple of Augustus, and being at a very high level, carried on a triple arcade one over the other, may very well have been called *over it*.

There are lofty bridges of this kind to carry the aqueducts across the gorges on the mountains, in several places between Subiaco and Rome, especially one which remains nearly perfect, about five miles from Tivoli, on the side next to Rome, on the road to Poli, called Ponte Lupo. The top of the bridge, with the *specus* of the aqueduct upon it, must be nearly a hundred feet above the level of the mountain-stream that passes under it. This *specus* is carried on a triple arcade, and level with the bottom of the upper arcade is a road for horses carried on a vaulted substructure, by the side of the two lower tiers of arches, and built up against them, so that they form one side of the vaults. There is a similar bridge now in use both for an aqueduct and for horses at Spoleto, between Rome and Florence, and there are remains of similar bridges in many places. It was always usual and necessary to have a road by the side of an aqueduct for the use of the *aquarii*, or the men charged with keeping it in repair. The plan of the bridges from the Palatine to the Cœlian at one end, and to the Capitol at the other, seem to have been exactly the same. On the side next the Cœlian we have some arches of the lower arcade remaining, and here we have no traces of the lower bridge for horses ; but on the side of the Palatine opposite to the Capitol we have two of the tall brick piers, with the springings of the arches of the upper arcade, and remains of the bridge for horses by the side of it, as we have mentioned.

HISTORICAL PHOTOGRAPHS

ILLUSTRATIVE OF THE CONSTRUCTION OF WALLS.

[*The numbers refer to Mr. Parker's Catalogue.*]

TYPICAL EXAMPLES.

*Those marked with * are from drawings, valuable for historical purposes,
but not as photographs.*

TIME OF THE KINGS.

OPUS QUADRATUM.

Wall of Romulus on the Palatine, B.C.
750? (Livii Hist., lib. i. c. 11.) 779

“Quadrata saxa . . . sunt enim circa
Urbem.” (Vitruv., de Archit., lib. ii.
c. 7.)

Tabularium on the Capitol, the ancient
part, B.C. 730. 2646

“Ejus vestigia nunc manent tria
. . . quod post Ædem Saturni in ædi-
ficiorum legibus,” &c. (T. Varro, de
Ling. Lat., lib. v. c. 7.)

Wall of the Kings (A.U.C. 189, B.C.
564; Livii Hist., i. 36) in the Forum
of Augustus, and Wall of Travertine
between that Forum and the Forum
Transitorium of Nerva, A.D. 96, in-
serted in the old wall of tufa. 844

“Numa built one temple common
to them all, between the Capitoline
and Palatine hills. Both these hills
had already been encompassed *with
one wall.*” (Dionys., Hist., lib. i.
c. 66.)

Interior of a Tower by the side of the
Circus Maximus, at the foot of the
Palatine, probably part of the wall
that enclosed the Palatine and the
hill of Saturn as one city, afterwards
used for the Pulvinarium of the Cir-
cus Maximus. 748

“Loca divisa patribus equitibus-
que.” (Livii Hist., lib. i. c. 35.)

Wall of the Kings on the Aventine,
near S. Prisca, probably built by the
Latins when settled there. (Livii
Hist., lib. i. c. 33, and iii. 50.) 829

MAMERTINE PRISON—Lower Wall of
Tufa, time of Ancus Martius. 848

“Ancus . . . Carcer . . . in media
urbe imminens foro ædificavit.” (Livii
Hist., lib. i. c. 33.)

“Ut frangendi carceris . . . dele-
gatum in Tullianum.” (Ibid., lib.
xxix. c. 22.)

“Lautumiæ . . . carceris Lautumia-
rum.” (Ibid., lib. xxxii. c. 26.)

“In inferiorem carcerem.” (Ibid.,
lib. xxxiv. c. 44.)

Wall of Servius Tullius. (Livii Hist.,
lib. i. c. 36; Plinii Nat. Hist., xxxvi.
24. 3.) 793

TIME OF THE REPUBLIC.

CONCRETE. FARTURA.

Concrete (*fartura, opera a sacco*) in
layers, in a Fort under S. Saba, B.C.
300 (?). 993

This wall is faced with blocks of
tufa in the style of the Kings in the
lower part, now underground, as was
shewn in some excavations in 1870.

Early Concrete Wall on the Palatine,
B.C. 300 (?). 991

“Intrinsecus quæ medio calcato
farturis.” (Vitruvius, lib. ii. c. viii.)

OPUS INCERTUM.

Arch in the Emporium, B.C. 175.
(Livii Hist., lib. xli. c. 32.) 990

Wall of a House of the time of the
Republic, B.C. 100 (?), on the Vimi-
nal. 2082

“Antiquum quod incertum dici-
tur.” (Vitruvius, lib. ii. c. 8.)

TIME OF THE EMPIRE.

OPUS RETICULATUM—NET-WORK.

Muro Torto, B.C. 100(?). 781

House of Nero, A.D. 60. (Plinii Nat.
Hist., lib. xxxvii. c. 24. 5. 7.) 1285Villa of Hadrian, at Tivoli, A.D. 120.
899“Reticulatum quod nunc omnes
utuntur.” (Vitruvius, lib. ii. c. 8.)

OPUS LATERITIUM—BRICKWORK.

Cornice and Window in the Pantheon
of Agrippa, B.C. 26. (Dion Cassius,
lib. liii. c. 27.) 1237House of Nero, with flat brick Arches.
326Capital and Cornice, Amphitheatrum
Castrense, A.D. 135. 994Thermæ of Antoninus Caracalla, A.D.
212. (Spartianus, c. 9.) 978

TRAVERTINE, OR MARBLE.

Facing to the Tomb of Cæcilia Metella,
B.C. 103. (Inscription.) 979Temple of Fortuna Virilis, A.D. 10.
(Taciti Annales, lib. ii. c. 44.) 976Arcade of the Mamertine Prison, in the
Forum of Julius Cæsar, A.D. 22.
(Inscription.) 778Temple of Antoninus and Faustina
A.D. 161. (Medal and Inscription.)

975

FOURTH CENTURY. DECADENCE.

Villa Quintilii, on the Via Appia. 1134

Circus of Maxentius, A.D. 310. 977

MEDIEVAL. BRICK-WORK.

Arcade, S. Stefano Rotondo, with a
Byzantine Capital, A.D. 461. 995House of S. Gregory on the Coelian,
A.D. 590. 996Church of S. Hadrian in the Forum
Romanum, A.D. 626. (Anastasius,
Honorius, 120.) 998Apse of the Church of S. John, at the
Porta Latina, A.D. 1120, and Wall
of Church, A.D. 772. 999

OPERA SARACENESCA.

Campanile of the Church of S. Rocco,
at Frascati, A.D. 1305. 709Monastery of S. Sisto Vecchio, Rome.
974

ADDITIONAL EXAMPLES^a.

OPUS QUADRATUM.

Wall at Lanuvium, B.C. 800 (Livii Hist., lib. i. c. 1, et lib. iii. c. 29), now Civita Lavinia.	2386
Tusculum—Construction of Opus Quadratum, west side, c. B.C. 800 (Livii Hist., lib. i. c. 1).	1900
Fiesole—Etruscan Wall built of split tufa, corresponding with the Wall of Romulus in Rome.	517
Vico-Varo—Wall of large stones of early character,—called Cyclopean.	1569
Wall of the time of the Kings, on the Aventine (of the Latins?), A.U.C. 114, B.C. 639 (Livii Hist., lib. i. c. 33, et lib. iii. c. 58).	749

THE SECOND PERIOD.

Wall of the Circus Maximus, A.U.C. 30, B.C. 109(?).	780
Wall of the Kings, A.U.C. 30—60(?), B.C. 723—693(?), in the Forum of Augustus, of the enclosure of the Palatine and Hill of Saturn in one City.	881
Tabularium, east end, with Doorway bearing Inscription, B.C. 35.	577, 578
Wall of Servius Tullius, B.C. 564, near the Railway Station (destroyed in 1870).	792
Mamertine Prison—Walls of Tufa, time of Ancus Martius, A.U.C. 121, B.C. 631.	849

THIRD PERIOD, A.U.C. 100, B.C. 200(?).

Temple of Spes in the Forum Olitorium, B.C. 524(?), or B.C. 261(?).	1231
Temple of Juno Sospita in the Forum Olitorium, B.C. 194.	1230
(Livii Hist., lib. xxxiv. c. 53, in the Church of S. Nicolas in Carcere.)	
Temple of Pietas, B.C. 180.	1229
(Livii Hist., lib. i. c. 84), in the Forum Olitorium.	

FARTURA OR CONCRETE.

Muro Torto, B.C. 80(?).	992
Villa of Hadrian, at Tivoli, A.D. 120.	900

OPUS RETICULATUM.

Mausoleum of Augustus, B.C. 28.	987
Tomb on the Via Ardeatina, time of Sylla, c. B.C. 80.	1182
Part of a Tomb, c. A.D. 100.	1942
From an Aqueduct (the Anio Vetus, as rebuilt by Trajan, near Tivoli).	950
— Reservoir of the first century, in the Thermæ of the Gordiani.	927
Tusculum—House of Cicero, B.C. 20.	1894 & 1895
Domus Hortorum Domitii.	2107

TRAVERTINE.

On the Esquiline, near S. Pietro in Vincoli.	800
Mamertine Prison, the part rebuilt, A.D. 22, with Inscription.	580

SPERONE. LAPIS GABINUS.

Arco di Pantano, in the Forum of Augustus.	1465
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OPUS LATERITIUM.

FIRST CENTURY.

Doorway and Window of a shop of the first century, in the Infima nova Via (T. Varro), called the street of Julius Cæsar, at the foot of the Palatine on the side of the Circus Maximus. (Plinii Nat. Hist., lib. xxxvi. c. 24.)	746
Lateritium and Reticulatum—House of Nero.	1252
Arches of Nero on the Cœlian.	78
House of Pudens, c. A.D. 60.	178
Hall of Lateran Palace, with Arches of a peculiar kind.	174
Tomb on the Via Appia Nova.	1037

^a Examples of the Construction of Walls are endless, those selected are characteristic of their respective periods.

Tomb over the Catacomb of the Jews,
in the Via Appia. 1755
Palace of Domitian on the Palatine,
A.D. 85. 1756
Tombs on the Via Latina. 1430 & 1431
Nero, A.D. 57, and Trajan, A.D. 100,
in the house of Nero. 1400
Arches of the first century (?) on the
Palatine. 1127

SECOND CENTURY.

Doorway of the Thermæ of Trajan,
A.D. 110, now in the Church of SS.
Martino e Silvestro in Monti. 1341
Arches of Vaults and Doorways in the
House of Pudens, as altered in the
second century.
2074, 2075, 2076, 2077
Angle of Wall of the Prætorium, *c.* A.D.
160, now in the Church of S. Croce
in Gerusalemme. 405

THIRD CENTURY.

Pediment, called of the Colossus of
Nero, but really of the time of Sep-
timius Severus, A.D. 220. 786
Meta Sudans, originally built A.D. 80 (?),
rebuilt A.D. 220. 1744
Arch of the Circus Alexandrinus, A.D.
230, now in the Piazza Navona. 1162

FIFTH CENTURY.

Clerestory of the Church of SS. John
and Paul, A.D. 417. 397

NINTH CENTURY.

Wall of Monastery of SS. Martin and
Silvester, A.D. 860. 1325

TWELFTH CENTURY.

Monastery of S. Clement—Wall, with
small round Windows. 938

HISTORICAL CONSTRUCTION OF WALLS.

SECTION II.

ON THE DETAILS OF ROMAN ARCHITECTURE^a.

BY R. P. PULLAN, F.R.I.B.A.

THE dates and histories of the various edifices of ancient Rome have ever been matters of dispute. Upon few subjects connected with archæology has there been greater difference of opinion. Niebuhr, Bunsen, Canina, and other eminent antiquaries have maintained opposite theories as to the date and destination of almost every building that once graced the imperial city. Some supposed the temple, now generally believed to be that of Mars Ultor, erected by Augustus, to be that raised by Trajan to his predecessor and patron, Nerva. Many maintained that the temple on the Clivus Capitolinus, now ascertained to be that of Saturn, was the Temple of Concord, rebuilt by Tiberius; others asserted that the Basilica begun by Maxentius, and completed by Constantine, was the Temple of Peace, commenced by Claudius, and finished by Vespasian: it is still a disputed point whether the stones of the stupendous structure, which stood on the Quirinal behind the Colonna Palace, are those of the Temple of the Sun, erected by Aurelian, or those of a temple dedicated to Jupiter, and built in the first century. All this uncertainty, all these differing suppositions, arise from the want of a proper test by which the age of a Roman building can be accurately ascertained on an examination of its architectural details.

There has always been a certain amount of difficulty in classifying Roman buildings, mainly owing to the fact that there was not that gradual development in the Roman, that has taken place in other styles of architecture. We can attribute the date of a Greek building with considerable accuracy, by an observation of the relative proportions of column and entablature to one another, and we can fix the date of a mediæval building to within fifty years by a com-

^a In the course of this paper constant reference is made to Mr. Parker's series of Roman Photographs, for without some such illustrations it will be found

difficult to understand the various changes which took place in the details of Roman architecture.

parison of the profiles of its mouldings ; but these styles passed through the usual stages of infancy, maturity, and decay, whereas the Roman architecture, with which we are acquainted—that of the late Republican and Imperial periods (the earlier remains are too slight and imperfect to afford sufficient basis for observations)—sprung to full maturity at once, and flourished for two centuries : during this period slight changes in its detail are all we have to guide us in the assignment of a particular building to its true date. It is only by close observation that the almost imperceptible differences which occur can be traced ; but by the aid of a few general rules I hope to point out characteristics which distinguish the details of Republican from those of Imperial architecture, and those of the time of Augustus and Trajan from those of Diocletian and Constantine.

It will, however, be desirable first, to consider the origin of Roman art, and it will be necessary also to explain the technical names given to the various members of the orders ; for as this book is intended as much for the general reader as for the archæologist, it is necessary to begin with rudiments, even at the risk of being tedious to the antiquary.

The chief reason why Roman architecture does not shew traces of progress and gradual development is, because it was borrowed bodily from the Greeks, and adapted without much modification to the wants of the Romans. I do not mean to assert for one moment that the Roman is not a distinct style from the Greek. One element in it, however, *the order*, is certainly common to them both, but its application by the Romans was entirely different from that for which it was originally intended by its inventors, the Greeks, and its combination with the arch gave it an entirely new service to perform. From this combination a novel style resulted, which differs as much in principle from the Greek as the character of the two nations differed. The other element in it, *the arch* with *voussoirs*, was borrowed from the Etruscans, and was employed in the oldest constructions of the Kings as early as B.C. 640. This use of the arch, and the dome and vault which are generated from it, is the distinctive mark of the Roman *arcuate* style, from the Greek *trabeate* style. A new principle was introduced, then unknown to the Greeks, from which all vaulted buildings, even our Gothic cathedrals, are indirectly derived.

There are so few remains of the Kingly or of the early Republican period, and these are all of such massive character, without ornament^b, that we are naturally led to the conclusion, that in the early years of Rome the people were too busily employed in con-

^b See Note A, at the end of this Section.

tests with their neighbours, and afterwards in consolidating the State, to have leisure or inclination for the cultivation of decorative architecture. The Romans, the most practical and utilitarian people of history, finding the genius of the Greeks useful to them, long before the extensive intercourse with Greece which followed the Macedonian wars, invited Greek artists to Rome, and, as it would seem, chiefly employed them in their works of architecture. Those of the edifices of the Republican period which have survived Imperial restoration are almost purely Greek in character, and we can trace the work of the “cunning” chisels of the Greek sculptors even on buildings of Imperial times^c.

It was in the time of Augustus that Roman architecture was reduced to a system by Vitruvius, who after a comparison of the writings of Greek architects, now unfortunately lost, and an observation of their buildings, produced a set of formulæ or receipts, after which temples and other buildings were to be erected: the conventionality he advocated, to an imaginative Greek the enslaving of art, was readily accepted by the practical Roman, who, with no time for invention, preferred erecting his temples according to a fixed law, to trusting to that innate sense of art which has no law, and of which he possessed only a very moderate share.

In order to judge how distinct a style the Roman was from the Greek, let us compare two representative buildings which speak of the opposite characters of the people who produced them:—the Parthenon, and the Colosseum. These edifices, though employed for entirely different purposes, are characteristic of their founders. The Greek had strong religious feelings, and the talent of the greatest artists of the day was devoted to the completion of the shrine of the tutelar divinity of the capital. The Roman, on the contrary, looked upon religion as part of the machinery of the State, useful for giving authority to public acts, and as an instrument to act upon the minds of the populace^d: his chief passion was for show; he was more proud of an amphitheatre, in which the people could meet by thousands, to be regaled by the spectacle of imperial splendour, and the massacre of the victims of national triumphs, than of the most beautiful temple ever erected. In the Parthenon, every member of the architecture is designed and placed in accordance with certain

^c For instance, the capitals from the villa of Lucius Verus, Photos. 1497 and 1502, are undoubtedly the works of Greek sculptors; one of these capitals is a counterpart of some that exist at Patras,

and resembles those of the Temple of the Winds at Athens.

^d See Note B, at the end of this Section.

ascertained laws of proportion ; the guiding mind of the artist is visible in every small detail ; nothing was done without a meaning, and to such an extent is refinement carried, that every line in the edifice is curved, in order to fulfil certain laws of optics ; in fine, the whole building is calculated to satisfy the tastes of a people of fine perception and high culture. The Colosseum, on the other hand, is a monument of imperial magnificence, on a scale in comparison with which the largest Greek temple would appear diminutive. A fine piece of construction, in which, regardless of the principle which induced the Greek to make the order the full height of his building, order is heaped upon order, and arch vaults over arch, columns are used as buttresses, and entablatures are supported by arches, the stronger upon the weaker, with such a total disregard of former architectural laws, as would make a Greek architect of the time of Pericles shudder : the result, however, is a magnificent edifice, exactly suited to the purpose for which it was intended,—the manifestation of the greatness of imperial Rome,—and characteristic of that strong-minded people, who made not only the inhabitants but the arts of other nations subservient to their ends.

The chief differences observable in these and other buildings, are that the Greek decorated the constructive parts of the building, while the Roman first constructed the building and then clothed it with ornament. In the first case, the ornament is an essential part of the structure ; in the latter, it is an addition. The Parthenon, with its ornaments chiselled off, would be a shapeless mass of stone ; but the Baths of Diocletian as they stand, immense piers and walls, with lofty, massive arches and domes, are perhaps as sublime, and certainly speak of the grand people who raised them as forcibly, as when they were lined with marble and covered with stucco ornaments. The chief reason for this distinction between the core of the building and the ornament which covered it, is due to the material and mode of construction. Though in the smaller temples, the walls are built in the Greek fashion called *pseudo-isodomos*, that is, in unequal courses, with broad slabs and narrow bond-stones of marble, on a backing of *peperino*, this style of building was not suited for immense buildings like the Thermæ ; and where high thick walls and immense vaults were required, brick was found to be a much more suitable material : thus brick and concrete formed the mass of the walls, and the vaults were of brick covered with tiles and overlaid with concrete. Marble must have been too expensive to have been used, even by the wealthy Romans, for the main walls, so this core of brick was adorned externally and internally by slabs

and veneers of thin marble, and mouldings applied to the face of the edifice. Again, the immense height of the structure precluded the Greek method of using a single order only of the full height of the front; so the Roman saw no impropriety in using the Ionic above the Doric, and the Corinthian above the Ionic. Thus the system of applying the orders as mere ornaments resulted from the requirements of the construction.

As *the order* forms the chief decorative feature not only in temples but in all other Roman buildings, it will be well to consider whence it was derived.

Some writers have lately opposed the generally-accepted theory that *the order* is an imitation of wooden construction, but, I think, without success. For, taking it for granted that the first places of shelter erected were of wood, the construction of them would naturally be that adopted now by the aborigines and first settlers in many countries; trunks of trees would be used as supports, i.e. the column not squared; upon these would be placed beams,—the architrave—cross-beams—represented by the *triglyph*, and the ends of rafters, by the various members of the cornice. This appears to be the origin of *the order*, whether the early Greeks imitated it in stone or derived it from the Egyptians. These separate parts of the order have been retained in all times. The Greek architect improved and refined the proportions of the original rude order which we see in the Temple of Neptune at Assos, of the fifth century before the Christian era, by increasing the height of his columns in proportion to their diameter, by lessening their diminution, by reducing the depth of the entablature, and by refining the curve of the bell of the capital, till he reached perfection in the order of the Parthenon. In addition to the original Doric, he invented the Ionic and Corinthian, and improved these till he had reached the *ne plus ultra* of beauty. This was the work of centuries.

The Roman conqueror finding this *order* ready to his hand, appropriated and modified it; rejecting on most occasions the simple Doric and Ionic, he preferred the Corinthian, as being more suited to his taste for display. He combined the Corinthian foliage with the Ionic volutes, and formed a separate order—the Composite; and modifying the Doric he produced the Tuscan^e.

The members common to these orders are the base (occasionally omitted in the Doric), columns, capital, and entablature, consisting of three divisions,—lowest, the architrave; middle, the frieze; upper, the cornice^f. In the Tuscan and Doric the entablature was

^e See Note A, at the end of this Section.

^f See Note C.

one-fourth the height of the column, in Corinthian and Composite one-fifth. The upper member of the cornice is the *cymatium*, a moulded stone generally of two curved faces, the lower convex and the upper concave, with a fillet above and another below. At the back of this stone is the gutter from which the water issues through lions' heads, placed at regular intervals—the *antefixa*. The *cymatium* in both Greek and Roman edifices is ornamented with honeysuckle and other ornaments. It is sometimes called the *cyma recta*.

Below the fillet, in the Doric, Ionic, and Corinthian orders, is a small moulding of similar curves, but reversed, called the *cyma reversa*.

A square member follows—the *corona*; this projects considerably beyond the face of the frieze. In late Roman buildings, the outer face is ornamented with perpendicular flutes. On the under side of it, in the Doric order, are ornaments consisting of eighteen small projections, *guttæ*, supposed to represent rain-drops under the eaves.

In the Ionic, Corinthian, and Composite, the corona is supported by brackets, called *modillions*, which in the two latter orders are richly ornamented. Between the *modillions* are sunk panels, *soffits*, adorned with large roses and other sculptured foliage. Below the *modillions* is generally an *echinus* or *ovolo*—egg and tongue moulding. Beneath the *ovolo* are *dentels* (teeth), oblong projections with indentations at regular intervals. The cornice is terminated by an *ovolo* or other moulding, plain or enriched.

The *frieze*, the middle member of the entablature, is occasionally adorned with sculpture, figures, or foliage. In the Doric order it has *triglyphs*, flat projections channelled one over each column, and the intermediate ones, at regular intervals, leaving square spaces (*metopes*) for sculpture.

The architrave, or lowest member, has two or sometimes three *fasciæ* (faces or bands), one projecting above the other, and a cyma,—*cavetto* (hollow), or other moulding, to separate it from the frieze.

To the original three Greek orders the Roman added two others, the Tuscan and the Composite.

The Tuscan, the simplest of all, is a modification of the Doric[§]. It was seldom used except where a wide intercolumniation was required, as in the lowest story of an amphitheatre, such as those at Verona and Pola. Its base consists of a plain *torus* (half-round) moulding placed on a square plinth; its capital of a square *abacus*, an *ovolo*

[§] See Note A, at the end of this Section.

beneath, a plain space or collar bounded below by an astragal or small half-round moulding; its frieze and architrave were plain, and its cornice simple without ornament. The column was unfluted.

The Doric order has an Attic base, which consists of an upper and lower torus, with a *scotia* (elliptical hollow) between, bounded by fillets. The column was sometimes plain, sometimes fluted. The capital has a square abacus, with a moulding above it, an ovolo, beneath a collar ornamented with rosettes, and an astragal as in the Tuscan.

The Ionic has sometimes an Attic base, and sometimes one imitated from the Asiatic-Greek base, consisting of two scotias separated by two small astragals and fillets, with a torus above and another below the scotias. This elegant form of base was common to Ionic, Corinthian, and Composite in the first century. For distinction, it may be termed the Asiatic base^h. The column had twenty-four flutes. The capital is too well known to need description. The chief difference between the Greek and Roman Ionic capital, is that in the latter the hollow beneath the abacus and below the ovolo is shallow, and bounded below by a straight instead of a curved line. The volute also is more simple, and formed of a fillet instead of a bead. Occasionally, as in the capitals in the Lateran Museum from the villa of Lucius Verus, there is a collar of honeysuckle ornament, like those of the capitals of the Erechtheum, at Athens, a convincing proof that they must have been the works of a Greek artist. The entablature has been already described.

In the Corinthian and Composite orders the base was either Attic or Asiatic, the column generally fluted, the capital deeper than the Greek, and more frequently covered with olive-leaves than with acanthus. The entablature has been already described. In a later period it was overloaded with ornament, scarcely any member being left plain.

The pilasters and archivolts of the arcades which accompanied the orders, corresponded with them in the character of the mouldings and the amount of decoration employed on them.

The general proportion of the height of the column to the diameter of the column was as follows:—in Tuscan, the column was seven diameters high; in Doric, eight; Ionic, nine; Corinthian, nine and a-half; Composite, ten.

The orders were applied to all buildings,—to temples, *thermæ*, *basilicæ*, *gymnasia*, theatres and villas; but as the chief remains in

^h See Note D, at the end of this Section.

Rome are those of temples, we naturally have most to say about them, therefore a short description of their classification may be useful.

Temples were—

1. *In antis*. Of three sorts, either those with pilasters but no columns, or with two columns between the pilasters, or with two additional columns in the *pronaos*, atrium, or vestibule.

2. *Prostyle*. Those which had columns on the front.

3. *Amphiprostyle*. When they had columns on each front.

4. *Peripteral*. Those which had six columns on the fronts and eleven on the sides, the distance between the cella wall and the columns being equal to the intercolumniation. The real signification of the word however is, ‘surrounded by columns.’

5. *Pseudo-dipteral*. With eight columns on the fronts, or the front and back *porticus* and *posticus*, and fifteen on the sides, and a space between the cella and walls equal to two intercolumniations.

6. *Dipteral*. With eight columns on each front and two rows at the sides.

7. *Hypæthral*. With ten columns on the fronts and two rows at the sides. Temples of this class had no roof to the cella.

8. *Pseudo-peripteral*. With six columns on the fronts and engaged columns at the sides.

9. *Monopteral*. Circular, with columns supporting a dome, but no cella.

10. *Circular peripteral*. When the columns surrounded a cella.

Temples were called according to the width of the intercolumniations ;—

1. *Pycnostyle*. When the columns were one diameter and a-half apart.

2. *Systyle*. When two diameters apart.

3. *Diastyle*. When three diameters apart.

4. *Aræostyle*. When the columns were far apart, but at no fixed distance.

5. *Eustyle*. When the side intercolumniations were two diameters and a-quarter, and the central interval was three diameters.

Owing to the passion of the Romans for rebuilding, there are unfortunately but few remains of the Kingly or of the early Republican periods. The structures of the former time were apparently of masonry with little or no ornament. Huge quadrilateral blocks were employed, laid alternately longitudinally and transversely without mortar, but fastened by metal cramps. If there were mouldings, they probably were of the character of those to be seen

in Photo. No. 1343, supposed to be the base of the Temple of Hercules (or some say of Spes), found at the Porta Maggioreⁱ.

The arch with *voussoirs* was introduced at a very early period; for though we find in the Mamertine Prison the dome constructed on the horizontal principle like that of the treasury of Atreus at Mycenæ, the fountain of Hippocrates at Cos, the Lion Tomb at Cnidus, and other very early works of the Greeks, we find in a contemporaneous structure, the Cloaca Maxima, the arch with *voussoirs* employed throughout.

The Greeks were unacquainted with this description of arch, and its natural sequence the dome, as the walls of Assos of this period, and the tomb of Mausolus, B.C. 353, sufficiently witness^k. It has been urged that they were acquainted with it, but that as it was opposed to their principle of architecture—the horizontal—they disdained to make use of it; but it is improbable that so intelligent a people should have neglected so manifest an improvement in construction; they would rather have embodied it in their system, and have made the other architectural forms to harmonize with it.

The remains next in date to those mentioned, and those in which the order is first visible, are the columns and entablature of the Temple of Spes, B.C. 261, in the church of S. Nicholas in Carcere (Photo. No. 663): these, it will be seen, are of a rude unfluted Doric, with clumsy capitals, more nearly approaching the Greek Doric than any subsequent work. The entablature consists of a shallow cornice composed of a corona, with a cavetto beneath, a deep frieze without triglyphs, and a narrow architrave. The church of S. Nicholas is built on the sites of three temples, those of Spes, Juno Sospita, and Pietas. The entablature of the last-mentioned temple was Ionic of the usual form. Its proportions resemble those of one I dug up on the site of the Temple of Minerva Polias at Priene, which, it appears from an inscription on one of its pilasters, was consecrated by Alexander on his march through Asia Minor, about the year B.C. 334: for this reason it may be supposed to be of the Republican period, and of about two or three centuries before the Christian era^l. This entablature has a bold cymatium, a massive corona, and dentels, with simple mouldings above and below. The frieze would appear, from the number of cramp-holes in it, to have been ornamented with metal plates. The architrave had two *fasciæ*. There is also an internal

ⁱ See Note E, at the end of this Section.

^k See Note F.

^l This temple was rebuilt B.C. 180, by M. A. Glabrius, duumvir. (Livii Hist., lib. xl. c. 34.)

architrave existing, with three *fasciæ* surmounted by an enriched moulding, and above it side architraves, which ranged with the transverse beams; these had three faces, and a bold ovolo above, see Photos. 114, 115.

The only temple existing supposed to be of the Republican period is that of Fortuna Virilis, now the church of Santa Maria Egiziaca^m. The original temple was founded by Servius Tullius, and was rebuilt in the time of the Republic. It is Ionic and systyle, with four columns on the front, and seven on the sides, five of which are engaged, that is to say, built into the walls. Some maintain that the engaged column is a sin against architectural propriety, that a column ought always to stand detached, as it did in the wooden prototype of the Temple. But the deduction is not altogether correct, for the wooden hut was not always peripteral, that is, surrounded by a verandah, but occasionally enclosed on one or more sides; and the most natural mode of enclosing it, especially if it were of large dimensions, would be to fill the interval between the props or columns with a thin wall of boughs or branches, leaving the trunks of the trees standing. The Greeks certainly, in the best periods, thought there was no impropriety in using the engaged column. It is found in the vast Temple of the Giants, at Agrigentum, and in the Lion Tomb at Cnidus, and was constantly employed by the Romans at all periods, so that it is not necessarily a proof of late date. No doubt the Temple of Fortuna Virilis was repaired in imperial times, but its plan would have been retained, though the architectural details may have been altered; for instance, we find here the Attic base, and over the door a bombed or rounded frieze, both of which are signs of a late period, so it is not safe to take the temple in its entirety as a specimen of the architecture of the Republican period.

The lower part of the Capitol, with the Doric colonnade, was erected B.C. 77. The columns, which were engaged with arches between them, can be clearly traced on the side of the Capitol facing the Forum. Upon the lower order, according to Canina, stood a second row of Ionic columns. From the details remaining, we may conclude that the architecture was of a bold and simple character.

The only other remains of Republican times are tombs. That of the Scipios stood near the Via Appia, adjoining a cross-road leading to the Via Latina. It had six Roman Doric columns, with architrave and cornice, upon a high basement, and a pyramidal roof, but so few details remain that they throw but little light upon the dis-

^m See Note G, at the end of this Section.

tinctive characteristics of the architecture of the Republican period. The tomb of Cecilia Metella, on rising ground about two miles outside the Porta di S. Sebastiano, is a huge circular structure of travertine, with an elegant frieze and cornice, ornamented with the *caput bovis*. The mouldings of the cornice have but little projection, and the cymatium is particularly flat, as in the early Greek buildings.

Thus we see that in times of Republican simplicity the plainer orders—Tuscan, Doric, and Ionic—were preferred; but in those of Imperial grandeur, the Corinthian and Composite became the favourite orders, and it is to them chiefly that the following rules for fixing the approximate dates must be applied; for, as a general rule, when the simpler orders are the chief, and not the subordinate features of a building, it belonged to the ante-Imperial period.

As it has been before stated, Roman architecture flourished for two centuries without any decided signs of decadence; though I think it may be shewn that the purest phase of the style was its earliest, that of the first century, for, as I have already mentioned, it reached maturity at once. Therefore, the first rule for ascertaining the approximate date is, to observe whether the original forms and proportions are preserved; that is to say, if they resemble those of Greek architecture. The proper relative proportions, for instance, are, that the frieze and architrave should be about equal in depth, and the cornice always rather larger. This is the case in the Temple of Mars Ultor, of the time of Augustus; whereas in the Baptistery of Constantine (Photo. 387) we find the architrave the largest of the three. The cymatium and corona are always prominent features in early work; and whenever the mouldings beneath them assume an importance that they have not in early architecture, we know that the order belongs to the time of the decadence. In Greek architecture, the curve of the cymatium is a sure indication of date: if it be almost straight, it belongs to the Archaic period; if the projection be great, and the curve very decided, to the Græco-Roman; but this is not the case in Roman architecture, as the latter form was adopted and retained by the Romans from the first.

The second guide is, the amount of ornament found on the members of the entablature. In Agrippa's Pantheon there is an absence of ornament; towards the time of the Antonines the corona was fluted (see Photo. 824 of the Temple of Antoninus and Faustina), and by the time of Septimius Severus the whole order was overloaded: a Greek artist would have left plain spaces for the eyes to repose upon, but in later times he evidently was overruled by masters, who demanded splendour regardless of cost. On comparing the entabla-

ture of the Temple of Vespasian (No. 1670) with the chaste remains of the Temple of Trajan (No. 815) one is irresistibly led to the conclusion that the former was executed in the time of Septimius Severus, when the temple was known to have been restored. The cymatium, corona, and spaces between the modillions of the Temple of Vespasian are covered with elaborate sculpture, and even the ovolo beneath the dentils is disguised by unnecessary foliage. If any one be inclined to doubt this inference, let him refer to No. 1671, the entablature of the Temple of Concord, built by Tiberius, but restored by Septimius Severus. This, though not quite so elaborate, evidently belongs to the same period as that last mentioned, rather than to the time of the successor of Augustus.

A third guide is, the character of the ornament. In the earlier buildings, the Greek honeysuckle and other similar forms are used in the cymatium (see Photo. 1684, and the beautiful fragments from the Ulpian Basilica, Nos. 736, 815, and compare them with the coarse foliage of the cornice of the third century, Nos. 872, 798). The contrast in style is most striking. Although the earliest works were the purest in form, I consider that the best period of Roman architecture included the whole of the first century and the early part of the second; and that the works of Apollodorus, in the time of Trajan, were perhaps the finest specimens of architecture Rome possessed. There is a refinement about the execution of the fragments (Nos. 736, 815) not to be seen elsewhere in Rome; the sharpness and beauty of the moulding, and the elegance of the ornaments, attest the palmy days of Roman architecture. The forum of Trajan, with the Ulpian Basilica with its double row of granite columns (the bases of which are *in situ*), the two libraries, the column of Trajan, and the Triumphal Arch, must have formed, perhaps the most perfect group of buildings in ancient Rome. The fate of the architect of this splendid series of edifices is an evidence of the treatment artists met with among the Romans. They were regarded as a better sort of artizans, and were looked down upon much as they are now by certain statesmen in our own land. Hadrian designed the Temple of Venus in Rome, and Apollodorus having declared that it was too excellent to be the design of an emperor, was put to death for his criticism.

There is an interesting collection of ornamental details in the Lateran Museum, illustrative of the progress and decline of art. Some of the capitals from the villa of Lucius Verus have been already mentioned, another (Photo. 2863) is of coarser workmanship, though the forms of the foliage are Greek; upon it is a cornice of

the third century, with broad ovolos and shallow dentels. Nos. 2859, 2861, 2863, are interesting specimens of Composite capitals. Nos. 2860, 2862, 2864, 2866, 2888, exhibit specimens of foliage from various buildings, chiefly of a late period, but there are among them some elegant fragments, with honeysuckle ornaments, belonging to the first century.

A fourth guide is, the character of certain mouldings, particularly of the ovolo. Compare that of the Temple of Spes, B.C. 261, and those of the Ulpian Basilica with those of the fragments from the College of the Arvales (Photo. 1227): in the two former, you will find that the eggs are near together and compact; in the latter, that they are sprawling, inelegant, with wide intervals. The base-moulding is also a guide to date. What we have called the Asiatic base was used for the Corinthian and Composite only during the first hundred years after the establishment of the Empire. Fine examples of it are to be seen (Photo. 1347) in the base of a column of the colonnade called Porticus Liviae, and in the Ulpian Basilica (Photo. 739). It was also used in the Pantheon, in the Temples of Mars Ultor, Jupiter Stator, and in that of Vespasian, all commenced in the first century; and even if these were restored at later times, it is not likely that the bases would be changed; so it is safe to consider the Asiatic base an indication of that period.

The bombed, or rounded frieze, is a certain sign of second-century work; it seems not to have been used before the time of the Antonines, and its presence in the doorway of the Temple of Fortuna Virilis induces me to consider that building to be of late rather than of early date.

But perhaps the best clue of all is the character of the execution of the work. In later times, towards the decline of Roman architecture, the walling was executed in a slovenly manner, with stones of irregular sizes, with wide joints and much mortar, and the ornamental mouldings have the appearance of having been carved in haste, at so much per yard. Wherever you see marks of the drill—round holes at the junction of the lobes of leaves, for instance—you may be certain that the work is of late date (see Photos. 798 and 1227).

Roughly-hewn mouldings, bases, and capitals, are sure indications (such as are illustrated in Photos. 795, 1348) of the period of decline. On the contrary, simplicity combined with high finish are evidences of the best period, which may be said to have lasted from the time of Augustus to that of Antoninus Pius. In another part of this book Mr. Parker has indicated an excellent method for determining the

date of brickwork, by an observation of the number of courses occupying a certain fixed space. The same rule may generally be applied also to masonry. In like manner, a close observation of the character of the execution of the ornamental part of the architecture will, after a little practice, enable you to form a tolerably accurate opinion as to the time of its execution.

In conclusion, a brief notice of the chief ruins not hitherto mentioned, in chronological order, with reference to the peculiarities of their architecture, as illustrated in the series of photographs, will shew that the foregoing tests will afford tolerably accurate proofs of date.

The 'Theatre of Marcellus was commenced by Julius Cæsar, and finished by Augustus.' It has two orders of superimposed columns, Doric and Ionic, and a wall decorated with Corinthian pilasters above. The arches between the engaged columns were plain, without archivolt. The proportions are excellent throughout. The portico of Octavia, erected by Augustus, was an enclosure in the form of a parallelogram surrounding two temples. The order of the colonnade was Composite. Two capitals, with small portions of an architrave of three faces, exist near the church of S. Angelo in Peschiera (see Photo. 74). These fragments do not enable us to judge of proportion, but the details, though much injured, are very fine.

The Pantheon, the first building of the Empire, erected by Agrippa, B.C. 27, the year in which Augustus took the title of Imperator, is the most perfect specimen of architecture existing in Rome, *a chef d'œuvre* of construction, clothed with appropriate architectural decoration. The details throughout are particularly pure, and form the best models for the Corinthian order. The various members of the entablature are of good relative proportion, and have but little ornament; the ovolo is oblong, and of good form; the architrave and frieze are about equal in depth, and the cornice about one-fourth deeper than either. The foliage of the capitals and modillions is of the olive-leaf. The bases are of the description we have termed Asiaticⁿ.

ⁿ There is considerable doubt whether any portion of the fine marble portico of the Pantheon is of the time of Agrippa or of Augustus. The circular building itself is entirely cased with brick, and all the ornamentation was originally of bronze. The portico is an evident addition; the brick front of the original building can still be seen behind

it. The portico was restored by Septimius Severus, A.D. 202, as recorded on the inscription upon the cornice. This inscription also mentions the name of Marcus Aurelius Antoninus as having restored the Pantheon; probably he added the portico, *c.* A.D. 166, but left it unfinished, and it was completed by Septimius Severus, A.D. 202.

The Temple of Mars Ultor, built by Augustus ; three columns and a pilaster are standing. This also is a pure specimen of the period. The temple was pycnostyle, with eight columns on the front, but only nine on the flanks. The relative proportion of the members of the entablature are the same as in the Pantheon. The order is not overloaded with ornament. All the ovolo and other enrichments are of that form which marks early style. The abacus of the capital is unusually deep, and the foliage, which is of the olive-leaf, bulges out more than in later examples.

The Temple of Jupiter Stator, Julius Cæsar, or Castor and Pollux, the three elegant columns of which, with their entablature, stand between the Palatine and the Basilica Julia, is supposed to be of the time of Augustus°. But it has some peculiarities which lead me to believe it to be of somewhat later date. The cornice is almost as large as the frieze and architrave together. The corona has a fluted ornament, the second face of the frieze and the abacus are enriched with foliage in low relief. The capitals, however, are of early form, and the base is Asiatic. Altogether, it is one of the finest fragments in Rome, and if not of the time of Augustus, it must have been erected soon after, and certainly during the first century. See Photo. 911 and 912.

There is a piece of cornice, consisting of a cymatium, with a bold honeysuckle and a plain corona, now in the museum in the Tabularium, said to have belonged to this temple ; but on the existing ruins the cymatium is plain, and the corona fluted, and the ovolo bolder and of earlier character.

No one who looks at the photograph of the entablature of the lower story of the Colosseum, (Photo. 1346,) can help being struck by the just proportion of its various members. It is one of the few buildings with a certain date ; we know that it was commenced by Vespasian A.D. 72, and finished by Titus A.D. 80.

The Temple of Saturn on the Clivus Capitolinus, of which there are three columns standing, was restored by Septimius Severus, and it is most probable that the entablature was remodelled at the time of the restoration, as we find a diminutive fluted corona with a disproportionate moulding above it ; the modillions are surrounded by coarse foliage, and the abacus is also fluted. The base, which is Asiatic, and the columns, were probably retained. (See Photo. 1670.) The entablature of the Temple of Concord, (Photo. 1671,) is more pure in style than that of the Temple of Saturn, but it appears to be of a much later period than the time of Tiberius.

° See Note H, at the end of this Section.

A similar disproportion between the corona and cymatium, and a like elaborate richness, are visible in the architrave standing upon two columns, called those of the Forum Transitorium of Nerva ; and without the evidence of an inscription found on the front of the adjoining temple, part of which existed in the fifteenth century, stating that the edifice to which these remains are believed to have been accessory was erected by Nerva, A.D. 97, I should be inclined to consider at least half a century later^p. Contrast its intricate richness with the chaste simplicity of the Ulpian Basilica, or with the elegant architecture of the Temple of Antoninus and Faustina, and you will instinctively perceive that it is less pure in style, and therefore probably later in date than either of them. It may possibly be part of a reconstruction of the second century.

The Arch of Titus, the finest of all the triumphal arches, was erected by Domitian. It is remarkable for its fine proportion, which Viollet-le-Duc infers was derived from the equilateral triangle.

The column of Trajan would do honour to any age. It is formed of immense blocks of white marble, hollowed to receive the staircase. The base is composed of eight stones only, and the capital of two. On the basement are sculptures, trophies and victories ; on the plinth is a wreath of laurel, with eagles at the angles ; round the column itself winds a procession of the Roman cohorts, represented as returning from their triumph over the Dacians ; and upon the summit, surmounting all, stood a colossal figure of the emperor. The beauty of the mouldings (Photo. 737), and the excellence of execution of the whole, point out Apollodorus, the architect of the adjoining Ulpian Basilica, as the author of the design.

It is to be regretted that so little remains of the ornamental part of Hadrian's great works, his villa at Tivoli, and his mausoleum (the castle of S. Angelo), that we cannot form a just appreciation of their style. It appears to have been of massive character. I feel inclined to attribute the fine fragment near the monastery of S. Francesca Romana (Photo. 825), and also the entablature called that of the Temple of the Sun^q, which is much too good for the time of Aurelian (A.D. 274), to that of Hadrian. Every one who has visited Rome is acquainted with the exquisite Corinthian Temple of Antoninus and Faustina, at the side of the Forum, and now incorporated into the church of S. Lorenzo in Miranda. This, though a work of the middle of the second century, is of a high style of art ; the temple has a portico, with six columns on the

^p See Note I, at the end of this Section.

^q See Note K.

front and three on the flanks ; the cornice a fluted corona, but no dentels ; the architrave two faces ; the entablature is one-quarter and a third of the height of the columns ; the frieze is ornamented with griffins, admirably sculptured. This may be considered the last pure building in Rome. After it there were but few great works carried out, and these at long intervals, all shewing a falling-off from the true principles of Roman architecture. The chief of these were the Antonine Column, the Arch of Septimius Severus, the thermæ of Caracalla, and those of Diocletian. Constantine's reign, a time of great activity, produced many edifices in which the traditions of art were altogether neglected. Occasionally, good details are to be seen, as in his Triumphal Arch (Photo. 1344), but these were evidently taken from the earlier structures^r. In his Baptistery, the usual proportions of the Composite order are no longer to be seen ; the cymatium and corona are smaller than the lower members of the cornice ; the architrave is deeper than the cornice, and it has a curved and sculptured moulding in the place of an upper fascia ; and in the order of his Basilica the corona was omitted altogether. The dome began to play a prominent part, especially in Ecclesiastical Architecture, and being transplanted by the emperor to his eastern capital, it became the chief feature in the Byzantine style.

In conclusion, it may be remarked, that in Rome, as in other cities, at all ages of the world, the periods of the best government, those of Augustus, Trajan, Marcus Aurelius, and Antoninus Pius, were those in which the purest and most classical architecture flourished.

^r See Note L, at the end of this Section.

NOTES.

ON the subject so ably treated by my friend Mr. Pullan, I was conscious that I did not know enough to be able to treat it in a satisfactory manner, and therefore I asked him to undertake it for me. I knew him to be very competent for the task; he has the great advantage of knowing the buildings of Greece and of Byzantium from personal observation, and not from notes *only*. As the Author of Murray's "Handbook for Turkey," he has shewn how thoroughly well acquainted with the subject he is; and having superintended some important excavations in those eastern countries also, was another advantage. The excellent manner in which he has executed the task committed to him shews that I was not mistaken in my choice. I have, however, had more experience in Rome itself than he has, and therefore I have ventured to make a few additions, which generally only confirm and strengthen what he has said, but here and there also to correct some oversights, which, if he had been in Rome another season, as I expected, he would himself readily have corrected.

NOTE A (p. 68).

The walls of this first period are also distinguished by the rude workmanship. In the second period the masonry is much better, the stones are cut with the saw, and closely fitted together, and some attempt at ornament in stone is made, consisting at first only of a square projection for a cornice, or a horizontal string, when the wall is high. Of this second period we have portions of the second wall of Rome to enclose the two hills, and some great public buildings for the use of the new city; the great building now called the Municipium, because the upper stories were devoted to the offices of the Municipality, with its courts of justice, must always have been so; the whole building was originally called the CAPITOLIUM (it has been described in a previous chapter). The great public prison of the kings is also of this period. In all these buildings we have the flat, square projecting cornice, sometimes supported by blocks of stone as corbels, but these are not carved.

The earliest architectural ornament carved in stone that is known in Rome is in the tomb of the Scipios, near the sarcophagus of L. Scipio Barbatus, who lived in the year 456 of Rome (B.C. 297), and it is thought by many well-informed persons that the Romans

derived this architecture from the Etruscans, not from the Greeks, or only indirectly from the Greeks through the Etruscans. The Tuscan or Etruscan order was also derived from them, and was not an adaptation by the Romans themselves from the Greeks. There are similar architectural details on several other Etruscan tombs that are well known.

The mouldings of the cornice over the original entrance to this tomb is very bold and massive, that on the sarcophagus is shallow, but this may arise from the nature of the stone being a hard *peperino*.

The description of the temple of Jupiter Capitolinus, as built by the Tarquins, is given by Dionysius :—

“Tarquinius, being informed of these things by the ambassadors, set the artificers to work, and built the greatest part of the temple, but was expelled before he could finish it; however, in the third consulship, the Romans completed the structure. It stood upon a high rock, and was eight hundred feet in circuit, each side containing near two hundred; since, upon comparing the length with the width of it, the former does not exceed the latter by quite fifteen feet. For the temple that was built in the time of our fathers *upon the same foundations* with the first, which was consumed by fire, is found to differ from the ancient temple in nothing but in magnificence and the richness of the materials, having three rows of columns in the south front, and two on each side. The body is divided into three temples parallel to one another, the partition walls forming their common sides. The middle temple is dedicated to Jupiter; and on one side stands that of Juno, and on the other that of Minerva; and all three have but one pediment and one roof^s.”

This shews that it was a temple of considerable size and importance, standing on the top of a rock (which we know from Livy^t was the Tarpeian rock); all the wooden part of it was burnt, and another temple was built *upon the old foundation*, in the time of the early Empire. The remains of this second temple were entirely destroyed in the fourteenth century, in order to use the marble for the church of Ara Cœli, and the grand flight of steps up to it, as recorded by an inscription. The rich bronze roof had previously been carried away by the Goths, as we know from Procopius. The parts not wanted were thrown over the Tarpeian rock, on the top of which this temple stood, and where the old foundations still remain. Flaminius Vacca records having seen the broken columns at the foot of that rock, buried several feet deep, and made visible by some excavations in his time. The old foundations, which were excavated by the Chevalier Bunsen about 1840, are now visible

^s This applies to the temple of the time of the Empire.

Dionysius Halicarnassensis, Rom.

Antiq., lib. iv. c. 61.

^t Livii Hist., lib. i. c. 55.

in the garden of the Prussian or German Embassy, where also the altar of the time of the early Empire has been left. The measurements given by Dionysius agree with those of the *porticus*, or colonnade, or arcade of the sacred enclosure, which surrounded or enclosed the temple. The back wall of this *porticus* remains, and in the centre of it ruins of the *cella*, with a portico in front of it. These ruins had been buried for centuries, or treated as foundations only, until they were excavated by Bunsen.

In another chapter of this work I have pointed out that in the time of the Kings of Rome all the ornamental part of architecture was of wood and bronze (as it had been in the temple of Solomon at Jerusalem), and therefore has all perished. I have also shewn that the Walls of the Kings may be divided into three periods; the first has wide vertical joints, the second fine joints, and the third has had iron clamps to hold the stones together. Architectural ornaments were not cut in stone until long after that period.

NOTE B (p. 69).

The modern Roman antiquaries naturally do not agree with this view, that the ancient Romans looked upon religion as part of the machinery of the State only. They contend that the Roman people have always been religious as well as superstitious, that their superstition did not arise from ignorance only, but often from excess of zeal in religion; they also cite an important chapter from Dionysius to prove the truth of their view:—

“I admire, therefore, these institutions of the Romans, and also those I am going to relate. The Roman was persuaded that the good government of cities was owing to these causes, which all politicians boast of, but few establish; first, the favour of the gods, the enjoyment of which gives success to every enterprise; next, temperance and justice, by which the citizens, being less disposed to injure one another, are more inclinable to unanimity, and make virtue, not shameful pleasures, the measure of their happiness; and lastly, military courage, which renders even the other virtues useful to their possessors. He was sensible that none of these advantages are the effects of chance, but that good laws, and the emulation of worthy pursuits, render a commonwealth pious, just, temperate, and warlike. He took great care, therefore, to encourage these, beginning with the worship both of the gods and geniuses; and, according to the most approved rites in use among the Greeks, he appointed temples, places consecrated, altars, the erecting of images, the representations and symbols of the gods, and declared their power, the beneficent presents they made to mankind, the particular holidays appropriated to each god or genius, the sacrifices which are most acceptable to them, the festivals, public games, and days of rest, and everything of that nature: but he rejected all such traditional fables concerning the gods as are mixed with blasphemies or calumnies, looking upon them as wicked, useless, and indecent, and unworthy not only of the gods, but even of good men; and accustomed

his people to think and speak of the gods with the greatest reverence, and to attribute no passions to them unbecoming their happy nature ^u.”

The augurs made use of the superstitions of the people for wise purposes of state, and by placing certain objects under the special protection of the gods they preserved them for centuries. For instance, any military engineer knows that it is not safe to allow buildings to be erected in the trenches of a fortress, for this reason they were always occupied as garden ground ; as is the case now in the principal fortresses of Europe, and probably of other nations also, and in Rome itself, in the trenches round the castle of S. Angelo. In early times this ground, therefore, was called the *pomærium*, and at a later time *pomeria*, or the garden ground. We are told that it was enlarged as the city was enlarged, which would naturally be the case ; for as each hill was occupied it was necessarily fortified at the same time, and the trenches, or the space between the inner and outer wall, would necessarily be enlarged at the same time. There was no *pomærium* to the Aventine, because the Tiber protected the part of it on the western side, and on the southern the cliffs were so high that outer *mœnia* were not necessary, and were not added until the time of Claudius, whose double gate remains, and part of his wall can be seen on the bank of the Tiber when the water is low (as mentioned in a previous chapter). The object of making an outer defence at that time was probably to protect the Emporium and the docks, which stood at the north end of the Aventine, in the valley between the cliffs and the river, but in a wider part. Our Roman friends also say that it is not fair to compare a temple, such as the Parthenon at Athens, of its best period, with the Colosseum, a great mass of buildings erected for a totally different purpose. It is also of different periods, the two lower stories only are of the first century, the upper two are of the third. In so lofty a wall as that of a great amphitheatre, it was natural to introduce more than one order of columns ; *in a temple* in Rome there could be only one, as at Athens. For instance, the portico of the Pantheon, and the temple of Antoninus and Faustina, are, in fact, all those of temples in Rome.

NOTE C (p. 71).

It may be convenient for students to give here the exact names of Vitruvius to these different details, as being the highest authority on the subject of Roman architecture.

The Order is composed of three principal parts,—

PODIUM, Basement.

COLUMNA, Column.

SUPERIORA MEMBRA, the upper member or entablature.

^u Dionysius Halicarnassensis, Rom. Antiq., lib. ii. c. 18.

Each column is again subdivided into three parts :—

The Column consists of—

BASIS, the Base.

SCAPUS, the Shaft.

CAPITOLINUS, the Capital.

EPISTYLIUM, the Architrave.

ZOOPHORUS, the Frieze.

CORONA, the Cornice.

The Cornice is also divided into—

MUTULI, the Modillions.

LACUNARIA, hollows in Soffit.

DENTICULI, the Dentels.

The upper member, or Entablature, consists of—

NOTE D (p. 73).

The base, here called for convenience Asiatic, consisting of a fillet *apophyges*, and two astragals, or rings, is usually called Corinthian or Composite, being used for those two Orders. The Composite Order was really a Roman adaptation and continuation of the Corinthian and the Ionic. The earliest examples of it are in the temples of Bacchus, Ceres, and Proserpine (?), in the outer wall (now of the church of S. Maria in Cosmedin), of the time of Tiberius, and in the Arch of Titus.

NOTE E (p. 75).

The details of the temple at the Porta Maggiore, shewn in the photograph No. 1343, belong to the time of the Republic. It was probably the temple mentioned by Livy^x, B.C. 218, as then used for a public supplication, being at the principal entrance into Rome.

NOTE F (p. 75).

The Greeks had a kind of circular domical roof over a round building called a *tholus*, as one of Pallas at Athens, mentioned by Pausanias, lib. i. c. 5, and by Vitruvius, lib. iv. c. 8; but this was not constructed on the principle of the arch.

NOTE G (p. 76).

There is considerable doubt about the actual date of the existing building of the temple of Fortuna Virilis. Some think that it is the temple built or rebuilt in "Cæsar's Garden" in the time of Augustus. Cæsar's Garden is a very vague term, and *may* mean the ground between the palace of the Cæsars on the Palatine Hill and the Tiber. Others think this building of very high antiquity, even of the time of the Kings, but we have no construction of the kind at that period, and carved Ionic capitals were certainly not introduced until long after that time. This temple, as it stands, is evidently of two periods, the *cella* is of an earlier character than the portico. In the *cella* the columns are pilasters only, they are half-

^x Lib. xxi. c. 62.

columns cut out of the tufa blocks of the wall, and the mouldings of the cornice are quite plain. This part is of the time of the Republic. In the portico the columns are perfect, and were detached, but the intervals have been filled up with a mediæval wall, when it was made into a church. The mouldings of the cornice of the portico are richly carved, and this part is certainly not earlier than the time of Augustus. The junction of the two works is very evident on the sides.

It is not intended here to deny that the Romans had buildings of Etruscan character long before the time of the Empire or the Christian era, but that the Græco-Roman style was then introduced by Greek artists in its perfection, although at first the more simple orders were used, and the richer ones afterwards. The Tuscan or Etruscan order was used as early as the time of the Kings on the porticus or arcade of the Tabularium, and in the temple of Spes in the Forum Olitorium. The Roman antiquaries generally consider the best period of their architecture to have been the time of the Flavian emperors, A.D. 70—100. There can hardly be said to be visible marks of decay until the third century, the time of Septimius Severus. In the time of Constantine the masons began using old materials again, which was the ruin of Roman architecture.

NOTE H (p. 81).

The excavations made in 1872, taken in connection with the words of Dionysius, have clearly proved that the celebrated "three columns" belong to the temple of Castor and Pollux, founded under the north-east corner of the Palatine Hill, when that hill and the hill of Saturn "were united in one city and enclosed in one wall," in the time of the early Kings. Augustus also says that the Basilica Julia was between the Temple of Saturn and that of Castor and Pollux. The foundation and raised platform of that great market-hall have been found, extending very nearly from one temple to the other; from the latter it is separated only by the pavement of the street. This temple was rebuilt by Tiberius; the existing structure is, therefore, of his time.

NOTE I (p. 82).

The Forum Transitorium is called also Forum Palladium by Martial^y. The figure of Pallas or Minerva, which is preserved over the cornice, agrees with this. This forum was built chiefly

^y "Limina post Pacis, Palladium que Forum." (Martial, Epig., lib. i. ep. 3.)

in the time of Domitian^z, and only finished by Nerva^a. The columns are built against an old wall and gate of the time of the Kings, a part of the second wall of Rome, used for the southern side of this long narrow forum. The backs of the houses on that side of the street stand upon this old wall. On the northern side, we have also the remains of a wall of travertine of the first century at the back (now behind the houses, with a passage leading to it through the Cafe di Pallade). This wall of travertine, of the time of Augustus or of Nerva, was the partition between these two fora. It is inserted into another great wall of the early Kings, used for the eastern side of the Forum of Augustus: the old builders did not destroy a substantial wall of which they could make good use. This lofty wall of the Kings was on the eastern side of the two fori, and had two gateway arches pierced through it, one into each forum; the northern one still remains, and is misnamed Arco di Pantano. It is built of the stone from Gabii called *sperone*, and is an evident insertion in the older tufa wall; the other was at the east end of the Forum Transitorium, and is shewn in one of the drawings of Palladio: it was therefore standing in his time. This connected the wall with the tower on which the Tor di Conti is built. This arch was called Arcus Nervæ.

NOTE K (p. 82).

The Temple of the Sun, to which that massive and splendid entablature and cornice belonged, was not the one built in the time of Aurelian, but was of the time of Marcus Aurelius and Commodus, dedicated to Sol and Serapis, called also the Serapeum, as appears from an inscription given by Gruter, p. lxxxv.

NOTE L (p. 83).

The buildings called by the name of Constantine were nearly all built under Maxentius, but after his death and the accession of Constantine, the Senate ordered them to be called by the latter name. Although there is a great falling off in the details of these buildings, the magnificent scale on which they are built gives them a very grand effect, and few buildings in Rome are more generally admired by strangers than the great building on the Summa Via Sacra, opposite to the Arch of Titus, now called the Basilica of Constantine, but formerly called the Temple of Peace. It was, in fact, a great market-hall. The Forum Pacis was behind it, and the Templum Pacis must have been near that spot. Considerable remains of an earlier building have been found under it, which many consider to have belonged to that temple.

^z "Minervam quam superstitione colebat." (Suetonius, Domitianus, 5 and 15.)

^a The inscription on the cornice is

preserved by Palladio, and gives the name of NERVA distinctly; Aurelius Victor also mentions that Nerva dedicated it.

APPENDIX TO THE HISTORICAL CONSTRUCTION OF WALLS.

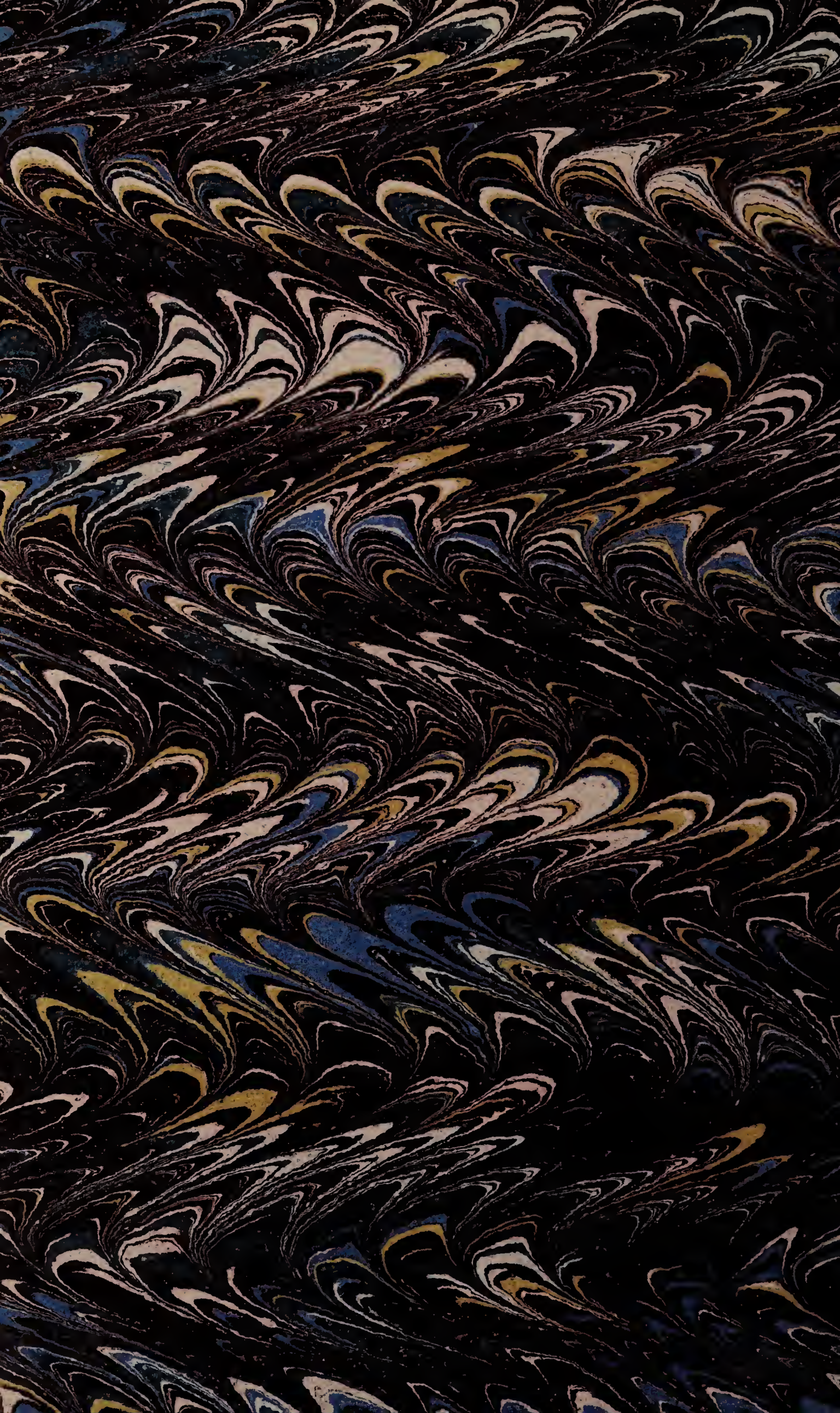
THE question is often asked, and is a very natural one, "How were the large blocks of stone, each a ton weight, brought from the quarries and raised to a height of sometimes fifty feet from the ground, and fixed in walls twelve feet thick?" This requires some explanation. The quarries of tufa were sometimes close at hand. The hills of Rome consist of tufa, and in cutting trenches through them the blocks of stone cut out were used at once for building walls to support the earth in a vertical position where there was no rock. The original settlers on the Palatine probably had no need to go further for their stone than the great trench across the middle of the hill, on the south side of Roma Quadrata, and the ledge round it at the foot of the wall and on which the wall stood, as we have seen well illustrated in the Wall of the Latins on the Aventine, where the same plan was adopted. A terrace or platform was cut at the level necessary for a road at the foot of the wall, with a second scarped cliff outside of it, forming a second line of defence. Below that was the great foss, also probably cut out of the tufa rock, unless they had got down below it into the clay under it. Each of the other hills, when originally inhabited, was therefore also fortified, for no habitation was safe in those days unless protected by walls.

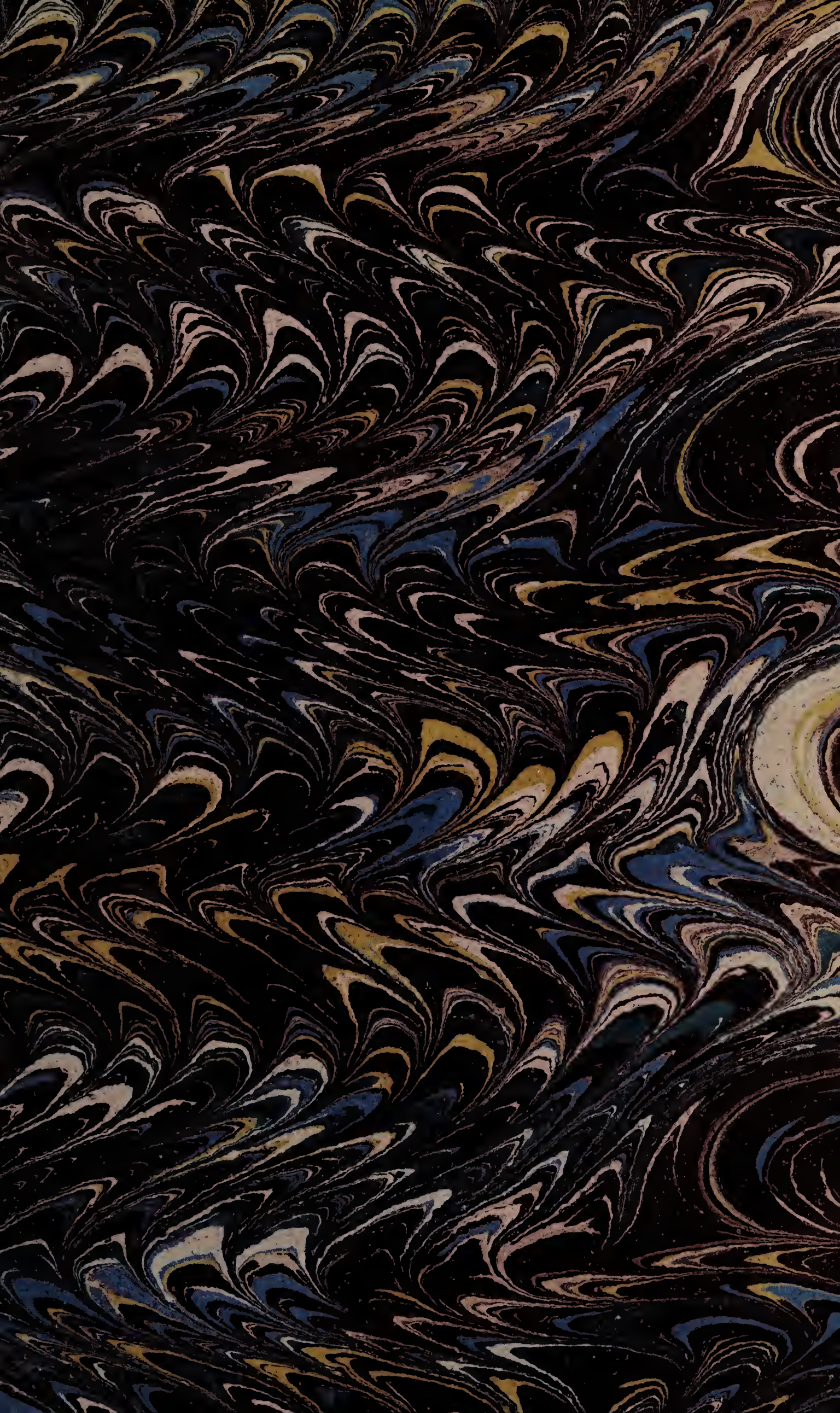
After this, quarries were made at the nearest and most convenient points; a large one has been found just to the north of the Prætorian Camp, outside of the walls, but there are subterranean quarries still in use in several of the hills, and remains of many other similar ancient quarries. To move these large blocks from the quarries they were placed on a number of small wooden rollers, and pushed along by manual labour only,—just as large blocks of marble are now pushed along upon the Marmorata or marble-wharf,—through the streets, until they are placed upon carts; but as each cart could only take one stone, "each stone was a load for a cart," as we are expressly told by Dionysius, land-carriage for stone must have been very expensive, that is, it required a great deal of men's time, and time is equivalent to money.

For this reason it does not pay to bring these stones from any great distance in carts. Water carriage is always much cheaper than any other, therefore quarries were made at the most convenient places on the banks of the river Anio, and very fine old quarries remain

a few miles up the river at the place now called the "Caves of Cervaro," and the "Caves of the Appia," about half-a-mile higher up, in which one of the springs of the Aqua Appia is situated. The stones were floated down the river on rafts, just as is done on the Rhine now ; and the timber of which the rafts were made was good for building purposes also, or some of it for firewood only, but always worth enough to make the carriage of the stone cost very little.

When it arrived at the foot of the wall where it was to be used, there were two modes of raising it to the height required. One was merely pushing them up on inclined planes, sometimes on artificial banks of earth, such as the great *agger* of Servius Tullius, where the wall was built simultaneously with the raising of the bank, of which it formed the outer facing. I am informed by officers of the Anglo-Indian army that in some parts of India, where similar building-material is found, this primitive mode of building is still used as the cheapest, and manual labour being very abundant, a bank of earth is made up against the wall, which is raised higher as the wall is raised, and remains behind it as part of the fortification. On the hills also the terrace, ledge, or platform before mentioned was not level, but had a very gradual slope, which formed the zigzag road up to the summit. The blocks of stone could therefore easily be pushed up to the foot of the wall, but to raise them to the top of a high wall another contrivance was required, and of this we fortunately have a representation on a sculpture on the tomb of the Aterii of the first century of the Christian era, but probably representing also a far more ancient custom. This is a kind of gigantic crane, very much resembling a modern fire-escape, excepting that in the place of wheels only, we have a tread-wheel, with several men inside of it ; as they walked up the incline they raised the end of the crane with the heavy stone attached to it. Steps are made up the crane, which serves as a ladder for two men to go up and fix the stone in its place. This done, the end of the crane is suffered to descend gradually to the ground, and the operation is repeated. In the sculpture two men are represented fixing a stone on the corner of a temple (?), or of a tomb, or some large building of considerable height, judging by the proportion of the size of the men, who look like pigmies at work upon it. This sculpture is represented in our photograph, No. 1500.





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